Smithsonian

April 1991

Attitude and style—
the ideal mix for
mannequins (p. 66)

Introducing the new Ford Crown Victoria.

Roomier.
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More fuel efficient.
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The moment you take the wheel of the 1992 Crown Victoria, you'll be taken with it.

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New Crown Victoria

Have you driven a Ford...lately? Ford

CROWN VICTORIA LX

April 1991

Smithsonian

Volume 22, Number 1

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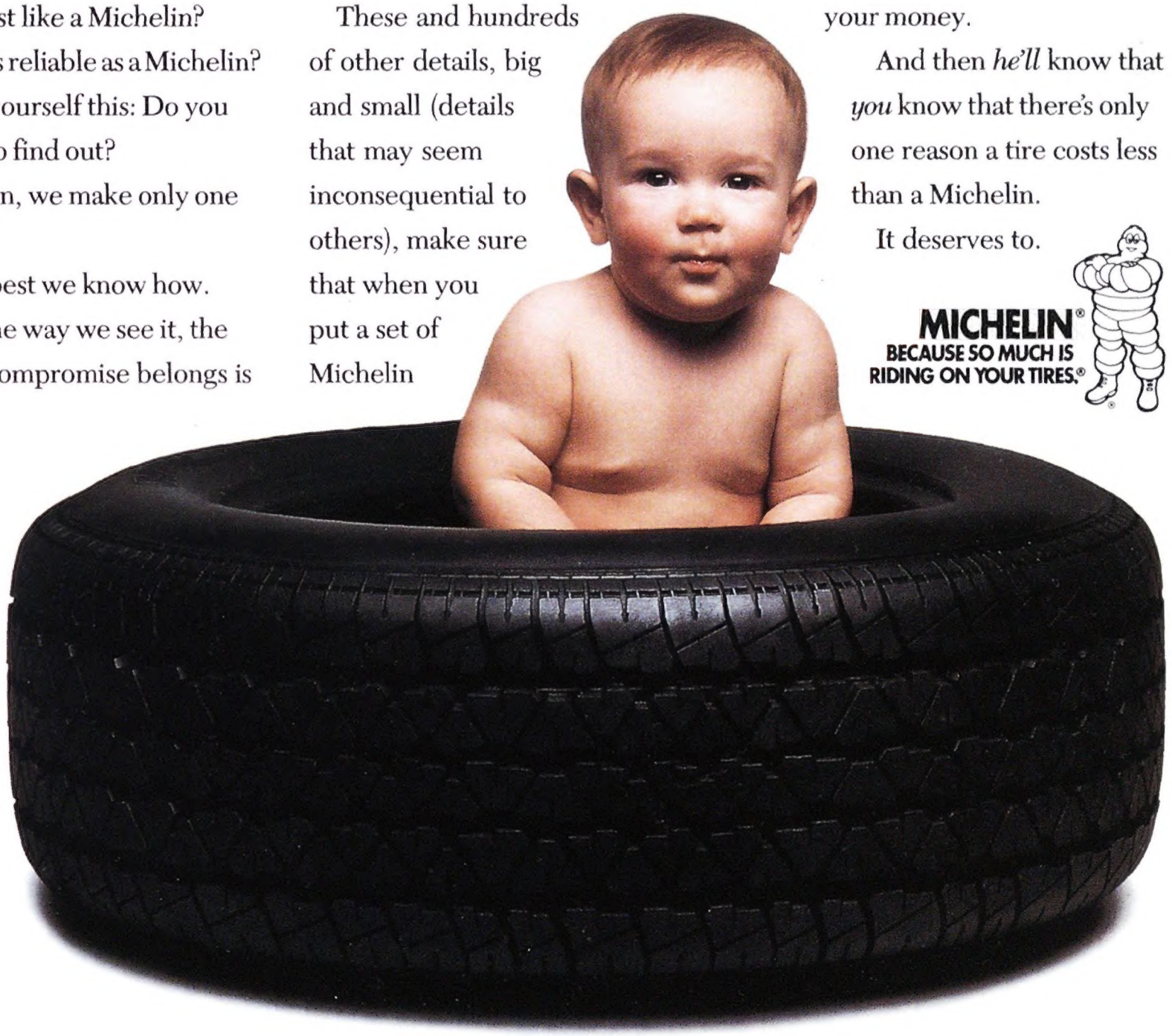

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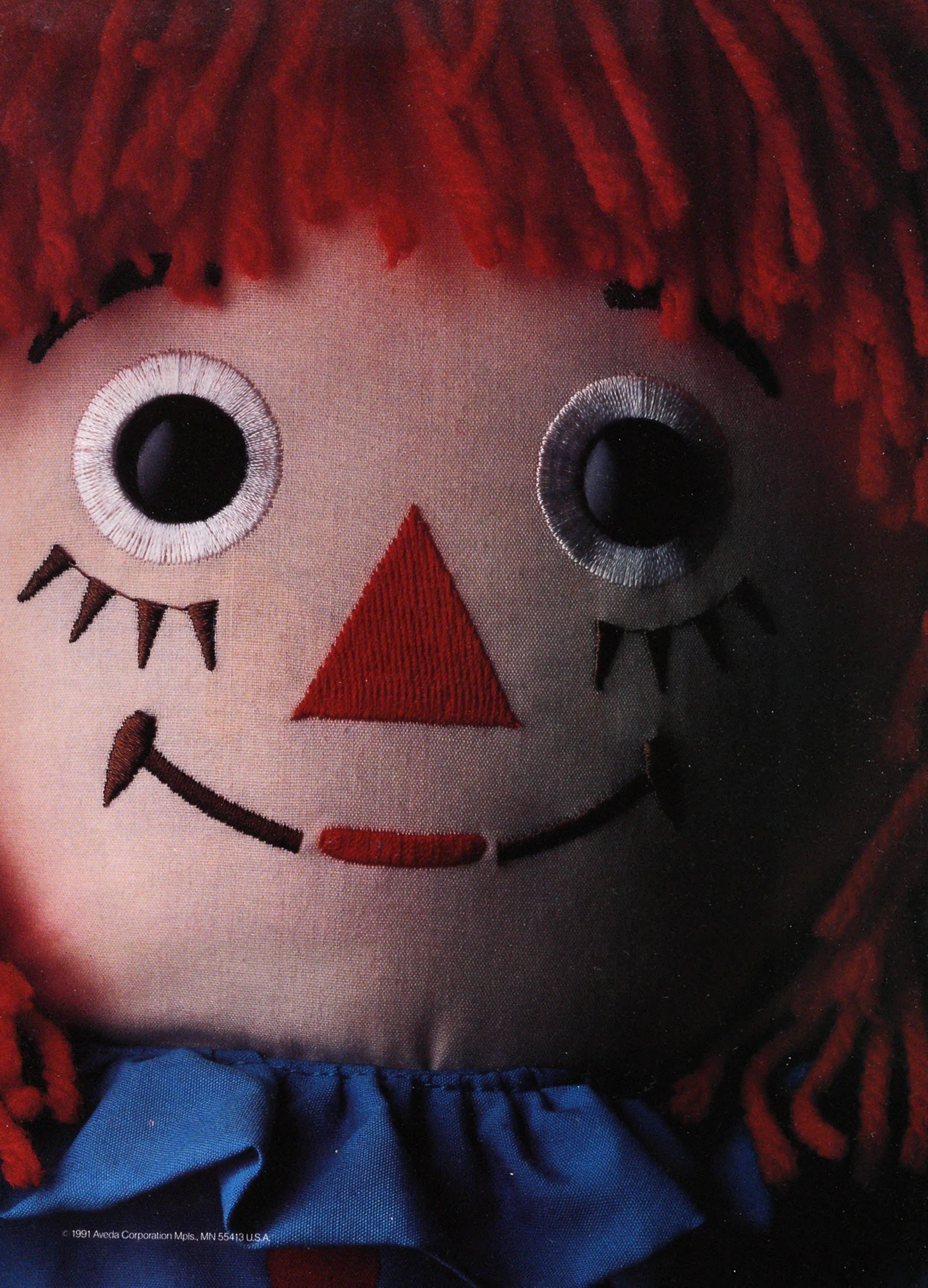

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Precision-engineered model of Shoo Shoo Baby is shown smaller than actual size of 9⅜" in length. Wingspan of 12⅞". Scale 1:96.

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Shoo Shoo Baby can be removed from its handsome display stand.

Even the nose art captures the authentic look of the original.

This aircraft was designed and engineered from the actual B-17G "Flying Fortress," nicknamed Shoo Shoo Baby. It has not been authorized or endorsed by any branch of the United States Military or its manufacturer.

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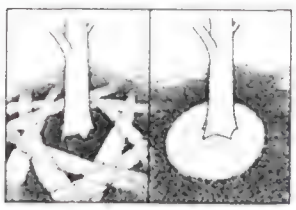

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Smithsonian horizons

Well before Vasco da Gama, the Indian Ocean was a vast meeting ground, not a barrier to trade and intercourse

At the outset of Europe's epic age of expansion in the 15th century, Portugal led the way with cautious but determined efforts to find a maritime route to the Indies. "The actual voyages down the west coast of Africa presented no exceptional difficulties to experienced seamen," historian C. R. Boxer has remarked, "other than the legendary but none the less real terrors of the unknown."

Finally rounding the Cape of Good Hope almost 65 years later, Vasco da Gama secured the services of the greatest Arab pilot of the age. Thus informed, he boldly took leave of the African shoreline and within a month had been carried by the monsoon across the Indian Ocean to the great Malabar emporium of Calicut (on the southwest coast of India). Uncertainty, rather than natural hazard, has always been the main restraint on our departures from the familiar.

One gains a similar impression from the Icelandic sagas. Here were Norsemen in the 10th and 11th centuries, crossing and recrossing the stormy North Atlantic in frail open boats. Dangers and losses there must have been, but the intensity of contact with Europe is striking. So also is the untroubled acceptance of arduous sea journeys as a routine part of life. Today most of us only fly over the oceans, losing intimacy with them. Will we soon begin to shun them in a way our grandparents never did, as dark and unfriendly barriers?

The Indian Ocean, much on our minds in the current Persian Gulf crisis, was of all the world's great seas least a barrier. The reliability of the monsoons is of course the key, providing a seasonal reversal of winds to encourage round-trip travel. Engaging in long-distance trade could become an attractive subsistence strategy even on arid, otherwise hostile coastlines. We may never know when and by whom this was first discovered, but archaeological findings clearly establish that there was substantial maritime penetration down the whole length of the Persian Gulf from lower Mesopotamia by the late fourth millennium B.C. and eastward to the Indus River Valley 500 years later.

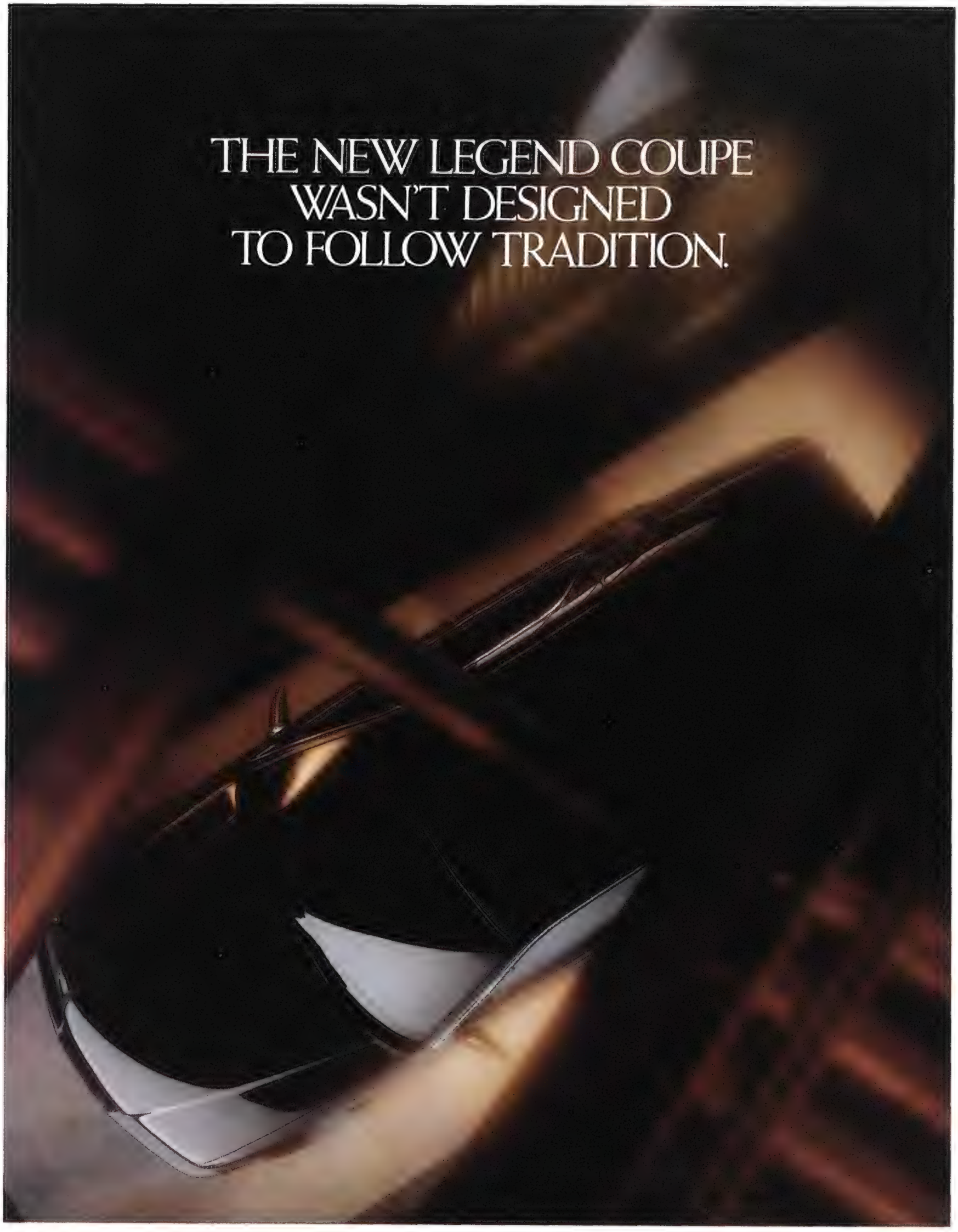
Ancient seamen seldom left records. Underwater archaeology one day may bring a flood of illumination, but east of Suez it is in its infancy. Hence there is a strong landward bias in what we learn of the Indian Ocean's role in history. Accounts tend to dwell on the figurative and fantastical, only rarely providing firsthand descriptions of foreign ports and the sailing directions to reach them. Bulk commodities like wood and grain do not feature in the Babylonian cuneiform texts on clay tablets that mention this trade; they are concerned with copper ingots, wool textiles and more-exotic substances, like gemstones and pearls.

Ideas must have accompanied those cargoes—about cities, states and gods, and civilization itself. Probably the influence was largely in one direction at first. By about the turn of the second millennium, however, something nearer a balance is suggested by a colony of Harappan traders from the Indus that had established itself near Ur. The most recent phase of occupation at that city of Abraham has been an Iraqi air base, which by now may well have been obliterated along with remains of some earlier phases.

Roman coins in large numbers found their way to India, and at about the same time Gujarati traders reached and settled on the Egyptian Red Sea coast. A broad, long-term commerce in export products came into being: gold, silver, ivory, incense, horses, cotton and wool textiles flowing eastward, in exchange for gemstones, celadon, spices, sandalwood and silk moving west. The rise of Islam extended this pattern further.

The scale of those long-distance movements is impressive. Thousands of Zanj prisoners from eastern Africa, for example, were brought as slaves to work in massed agricultural gangs in lower Iraq (participating there in a desperate, Spartacus-like revolt) in the ninth century. Along with many thousands of Westerners massacred in faraway Canton at about the same time was surely a large component of Persian and Arab seafaring traders. By then and probably earlier, seaborne immigrants from Indonesia had settled and begun to populate completely the huge island of Madagascar, fourth largest in the world. In the 11th and 12th centuries Jewish merchants in Cairo and even in the western Mediterranean were in regular contact with trading partners in India. With all allowances for what may never be known, for long centuries and even millennia before the arrival of the Portuguese, the Indian Ocean is better thought of as a vast concourse or meeting ground than as an impediment to movement and intercourse.

While it isn't quite true that the sun never sets on the Smithsonian, we do have an Indian Ocean outpost—one that I wish I could find a good excuse to inspect. A Smithsonian scientist first visited the Aldabra island group almost a hundred years ago. Today it is administered as a natural reserve by the Seychelles Islands Foundation, with the Smithsonian a founding board member and contributor. Never a Calicut, and in fact without permanent inhabitants, it is still a regular port of call for biologists.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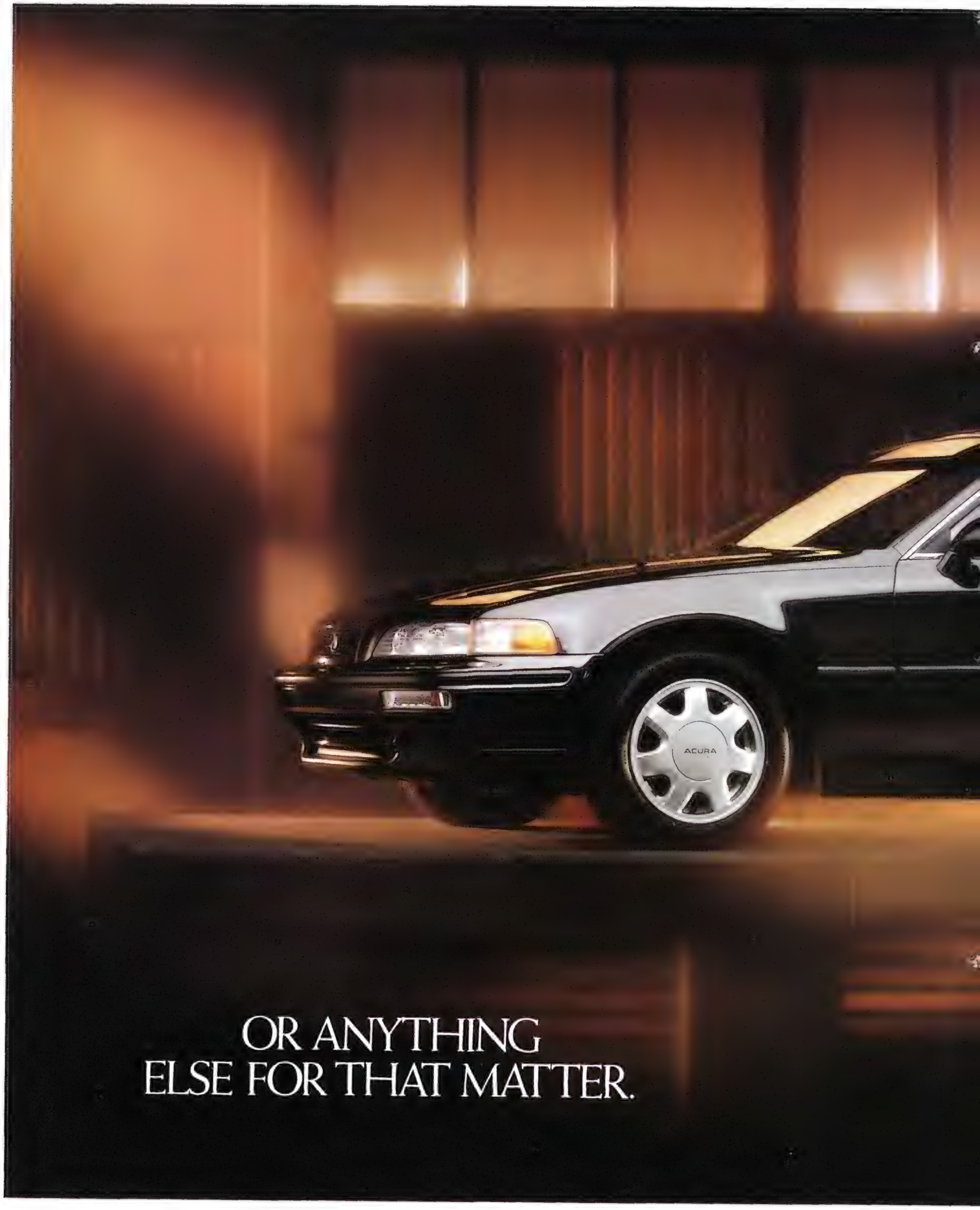

Traditionally, a new version of a successful automobile starts with the old version. Knowing how Acura engineers feel about tradition, it comes as no surprise that in building the new Legend Coupe, they started from scratch. The new, longitudinally mounted, 3.2-liter V-6 now offers 25% more power. The newly designed, four-wheel double-wishbone suspension enhances handling and road feel. And as far as the beautiful new shape is concerned, let's just say the wind

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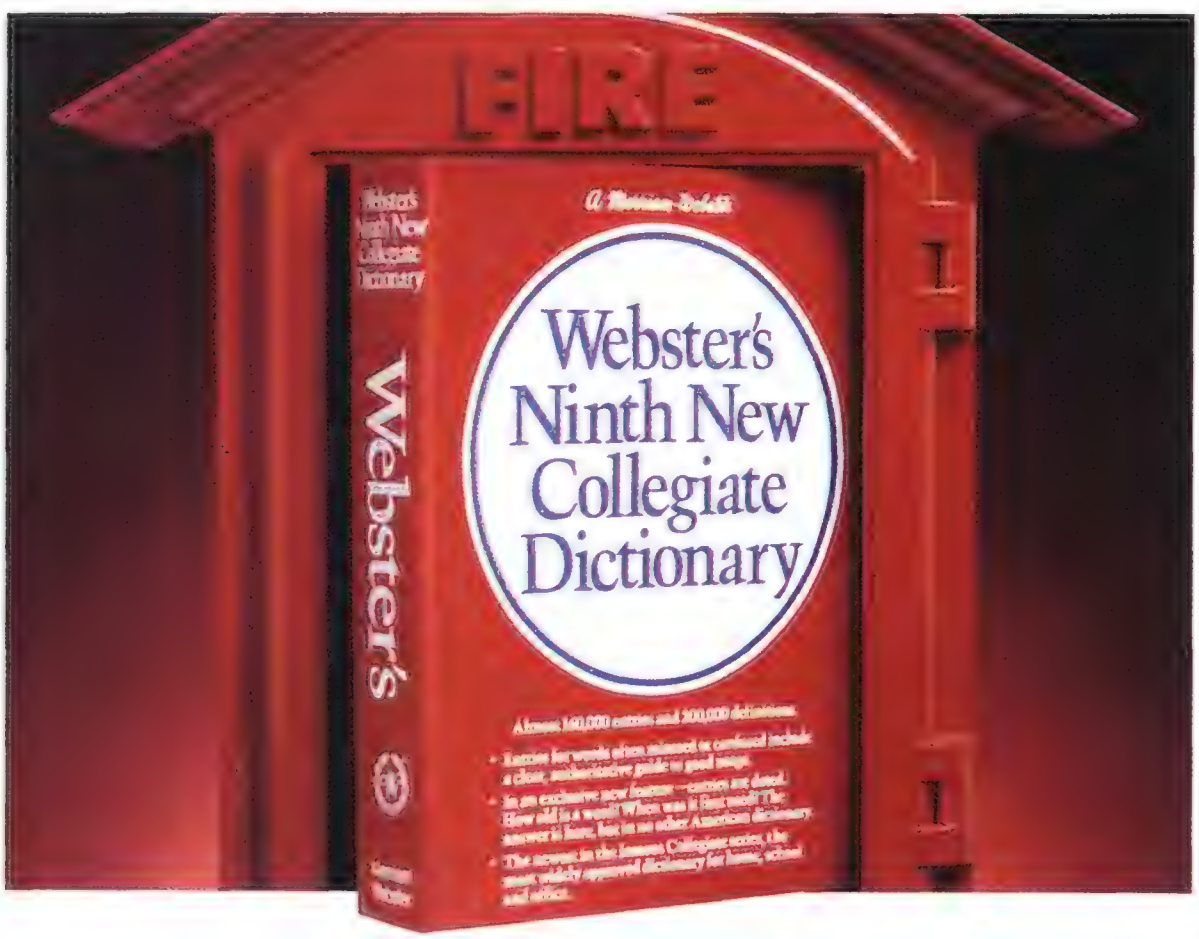

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Letters to the Editor

Carnegie Hall

Dear Sir: "The house on Goat Hill," featured in your February issue, was called the New York Music Hall when it opened in May 1891. Andrew Carnegie specified that it not be named for him. However, the public referred to it as "Carnegie's Music Hall," not the happiest connotation, as the traditional music hall of the day provided a quite different sort of entertainment. Therefore, Carnegie consented to the eponymy.

Theodor Schuchat
Washington, D.C.

Dear Sir: As music critic for the now-defunct *Newark News*, I was privileged to hear the world's greatest musical artists at Carnegie Hall in the 1920s: Heifetz playing the Brahms Violin Concerto, Horowitz returning to the concert world after a long absence, Toscanini playing Wagner with the Philharmonic.

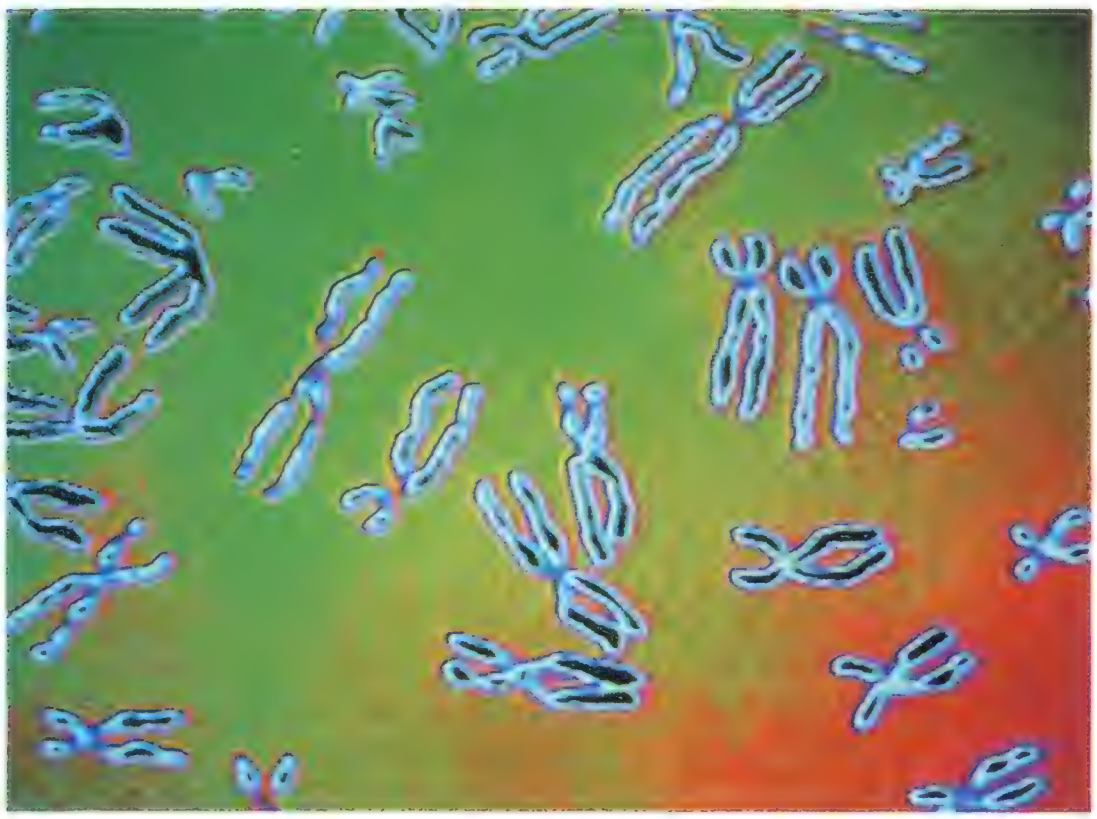
I also recall, in 1965, Leopold Stokowski, who held a press conference on the first performance of Charles Ives' entire Symphony No. 4.

To our surprise, he took several of us on a tour of the huge stage and explained his plans for increasing the quality of the acoustics. Imagine—in a hall that everyone agreed had always had marvelous acoustical properties. Maestro Stokowski's idea involved hanging several sounding boards along stage rear; they were then used for his concerts. I was pleasantly surprised to realize it was, to me, a great improvement.

Alan G. Branigan
Nutley, New Jersey

Dear Sir: Benny Goodman's was truly a landmark concert. For swing music to

See how computers are getting under our skin.



Everything about our bodies is stored in our genes. And someday, everything about our genes will be stored in computers.

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p. 69: Proof that the Loch Ness Monster and the Big Bad Wolf really do exist.

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be played—with black musicians—in that environment, in that day and age, was practically unheard of.

When asked how long an intermission his band would like, Benny replied: "How much does Toscanini have?"
Stephen Hawkins
Charlotte, Vermont

Tool collectors

Dear Sir: Several years ago my husband gave me my own toolbox for Christmas. In it he included two of the world's best tools—a 7½-inch slot screwdriver made by P&C with a really comfortable, translucent yellow handle, and a 16-ounce hammer made by Estwing in Rockford, Illinois. The screwdriver handle is a bit "dressed up," and the shaft of the hammer has that little twist that one must compensate for. They belonged to my husband's grandfather, who used them for years. I feel very lucky to have these heirlooms—as valuable to the heart as any brooch or silver. I plan to pass them on to my 4-year-old daughters, Katie and Nana. We'll have to draw lots to see who gets which!

I'd *never* sell the "world's best screwdriver" or that "crooked hammer that drives the nails straight" (usually).
Margaret Heizenrader
Tacoma

Dear Sir: Your cover description of "four Mack truck spanners, including a small torque wrench" is in error. Although "spanner" is a synonym for "wrench," there is no torque wrench in the photograph. A torque wrench always has a dial or other indicator to show the amount of torque that is being applied.
Frank S. Capps
Burbank

Cleanliness

Dear Sir: A fascinating glimpse into mid-19th-century American hygiene was provided by Henry Thoreau in *Walden*. Very much the individualist, Thoreau explained that every morning he "got up early and bathed in the pond" (presumably excluding winter). Furthermore, during the summer, he noted, "After hoeing or perhaps reading and writing, in the forenoon, I usually bathed again in the pond."

Thoreau wrote that "One old hunter . . . used to come to bathe in Walden once every year when the water was

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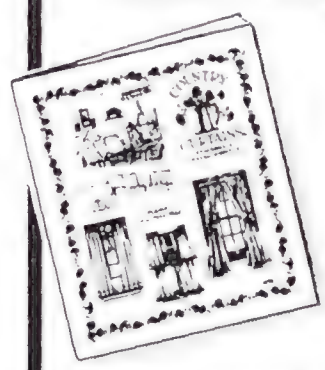

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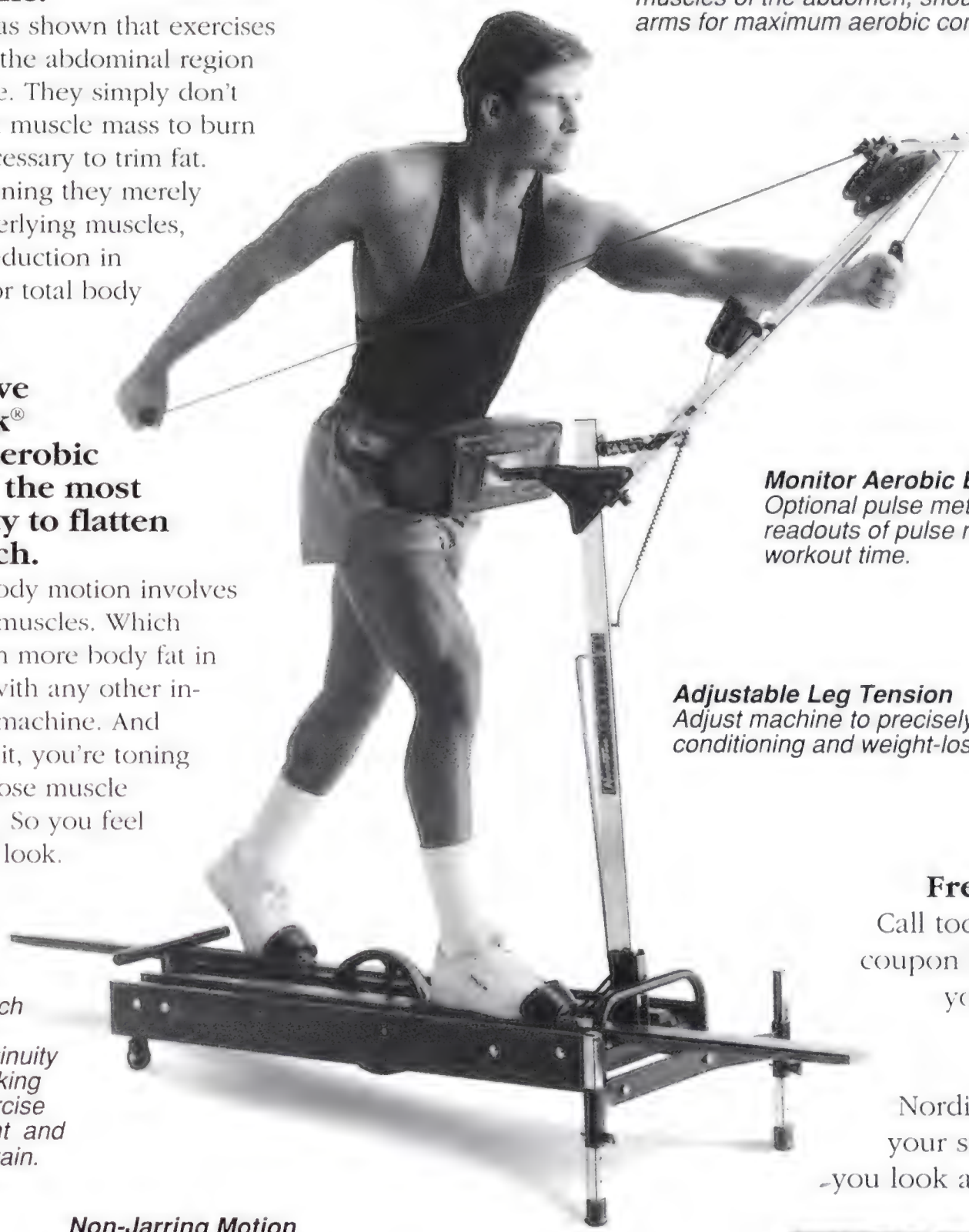

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p. 12: Meet Saltwater cowboys and spend the night in a bird's nest.

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warmest." But the hunter was outdone by a farmer who, Thoreau noted in his *Journal*, came to bathe in Walden Pond one Sunday and "told me it was the first bath he had had for fifteen years."
Daniel D. Reiff
Fredonia, New York

Dear Sir: In an idle moment at the *New York Evening Mail*, H. L. Mencken dashed off a bit of whimsy celebrating the 75th anniversary of the first bathtub in America which, he solemnly averred, "was then invented in Cincinnati." To his initial delight, the spoof was picked up and reprinted widely in newspapers. He was flooded with letters, some "actually offered me corroboration."

But as his jape began turning up in medical journals, in Congress, in serious reference books and even abroad, his "satisfaction turned to consternation." On May 23, 1926, admitting that his "history of the bathtub . . . was pure buncombe," he wrote, "If there were any facts in it they got there accidentally and against my design."
Albert M. Frieberg
Cincinnati

Chinese-Americans

Dear Sir: Regarding the caption on page 117, dynamite was invented by Alfred Nobel in 1866 and had not found its way to the Western United States by May 1869, when the Central Pacific was completed. Gunpowder, invented by the Chinese more than 1,000 years ago, was pounded into holes, using round sticks and a plug of dry earth. Care had to be taken not to set off an explosion. It was very dangerous work; especially difficult was timing the fuse so it would not go off too soon.
Robert Hannah
Oakland, California

Dear Sir: Mr. Jackson did not mention the long court battles that the Chinese had against unjust legal rulings, their protests against unfair labor practices or the hard-fought victories of the Chinese-American Citizens Alliance.
Connie Young Yu
Los Altos, California

Jellyfish

Dear Sir: I believe the statement referring to the giant sunfish as "the largest of all true fishes" needs to be amended. While sharks are cartilaginous as con-

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trasted with bony fishes, they are true fish. Vertebrate paleontologist A. S. Romer writes: "The cartilaginous skeleton of the shark is not an inferior development; they are the last of the major fish groups to appear in the fossil record."

The largest of all fishes, the whale shark, reputed to be 50 to 60 feet long, can weigh 90,000 pounds.

H. S. Mazet
Carmel, California

Billy the Kid

Dear Sir: Your article mentioned a man named Brushy Bill Roberts who, in 1950, claimed to be William Bonney.

This is interesting, considering that one J. Frank Dalton, age 102, made a wild claim that same year: *he* was Jesse James. His claim was also picked up nationally. The January 10, 1950, *New York Times* carried a picture of Dalton with two "corroborating witnesses" [below]. One, who said he had been a member of the James gang, was Brushy Bill Roberts.

It seems that Brushy Bill got around.

Ben Wynne
Jackson, Mississippi

Left to right are James R. Davis, Brushy Bill Roberts, J. Frank Dalton.

Dear Sir: When I opened the current issue to "Billy the Kid," "the memorable Lash LaRue" jumped off the page. I had just come from the filming of a 90-minute TV special that features . . . Lash LaRue.

Back in 1953 and '54, I appeared with Lash on the covers of many comic books [opposite]. He always wore black and was the first cowboy star to use a bullwhip. The photographs were taken on the sets of his films. One of those ten-centers recently sold at auction for over $500.

Seeing Lash's name in SMITHSONIAN made me very proud. Lash LaRue is my godfather.
J. P. Sloane
Nashville

Around the Mall and beyond

Dear Sir: Edwards Park's teaching example involving an elaborate chemical card trick took me back 60-plus years. When I was a little tad in Sunday school, a young minister held up to us three bottles of clear liquid, apparently identical. Of the first one, he said: "This is your soul as it first came into the world." I felt pretty good about my soul's appearing pure and blemish-free.

Then he held up the second bottle of clear liquid, saying: "This is temptation. It looks quite innocent to you, but see what happens if you yield to it." He poured some "temptation" into my soul, and lo! it went a lurid red. I felt awful.

But then he held up the third bottle, which to our innocent young eyes looked just as the other two had initially. "Take heart. The Word of God can save you from temptation and even cleanse your sinful soul." He poured a little of the Word of God into my horrid, red, sin-besmirched soul, and miraculously, my soul was crystal-clear again.

It was many years later before I again encountered phenolphthalein, in a high school chemistry class.
Bill Grierson
Winter Haven, Florida

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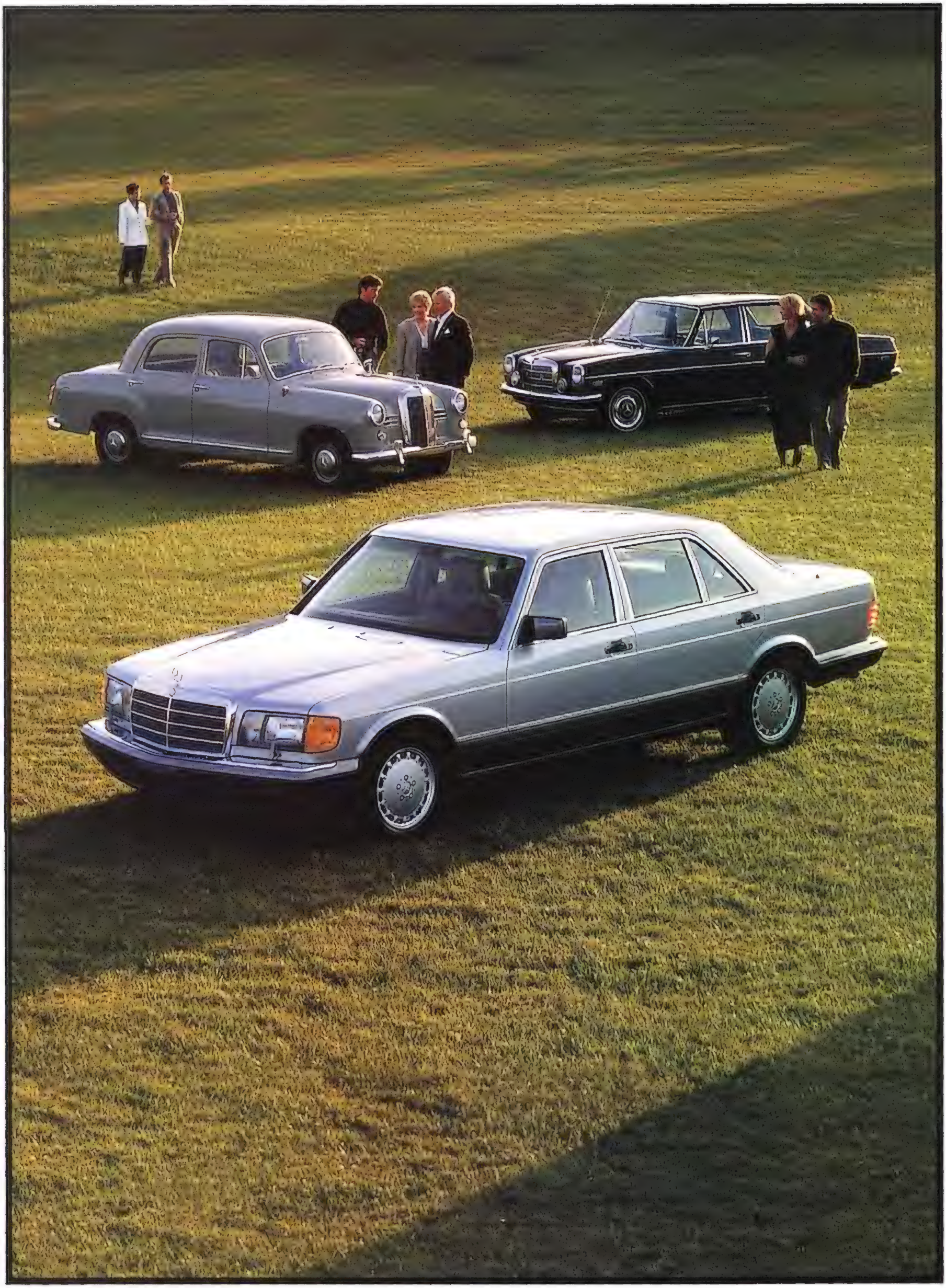

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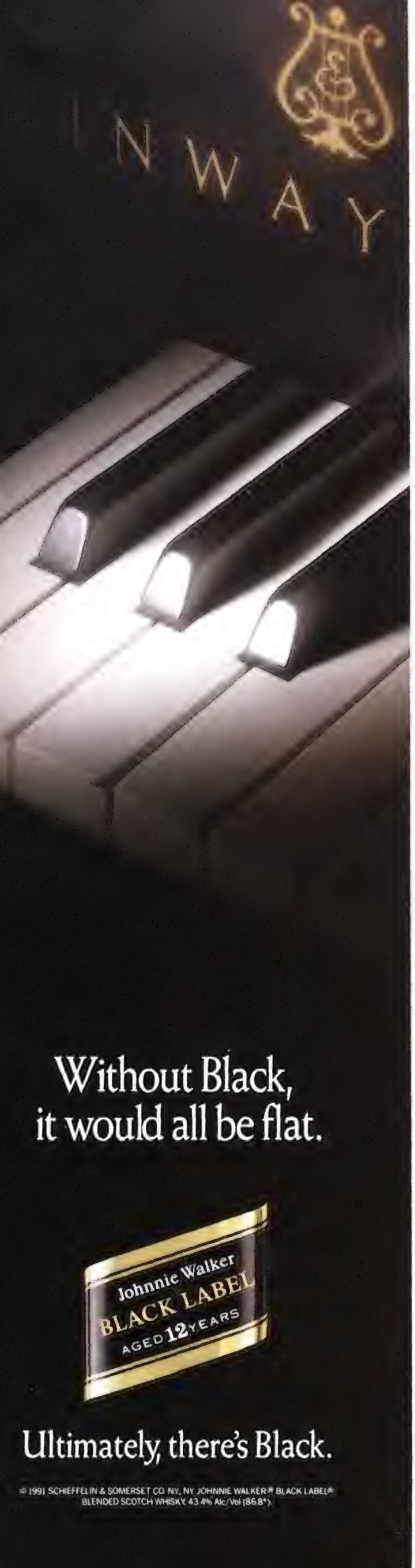
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Phenomena, comment and notes

In places where the shore is sinking we can preview a postulated future of rising sea level around the globe

One of the 10,000 frustrating things about life is that everything is more complicated than it looks. What seems perfectly simple on the surface turns out to be a barrel of octopuses with bad attitudes, tangled and squirting ink.

What could be simpler than the idea of "sea level"? It's the baseline from which we measure the altitude of everything else. When we call Denver the mile-high city, we mean it is 5,000 feet above sea level. Take away the daily and monthly tidal changes, the occasional storm surge, and what is left is the mean level of the oceans. Up until now it was my understanding that this level has been rising at a majestic, unthreatening rate and, naturally, at the same rate around the world.

The global warming we hear so much about could make sea level rise much faster, perhaps inundating much of Florida, Bangladesh and the world's great coastal cities. I believed that was a separate question, however, to be worked out in the coming decades either by scientists with supercomputers or by us layfolk when we notice waves breaking on Wall Street. In the meantime we can relax, even as the glassy ripples wash ever so slightly farther up the beach.

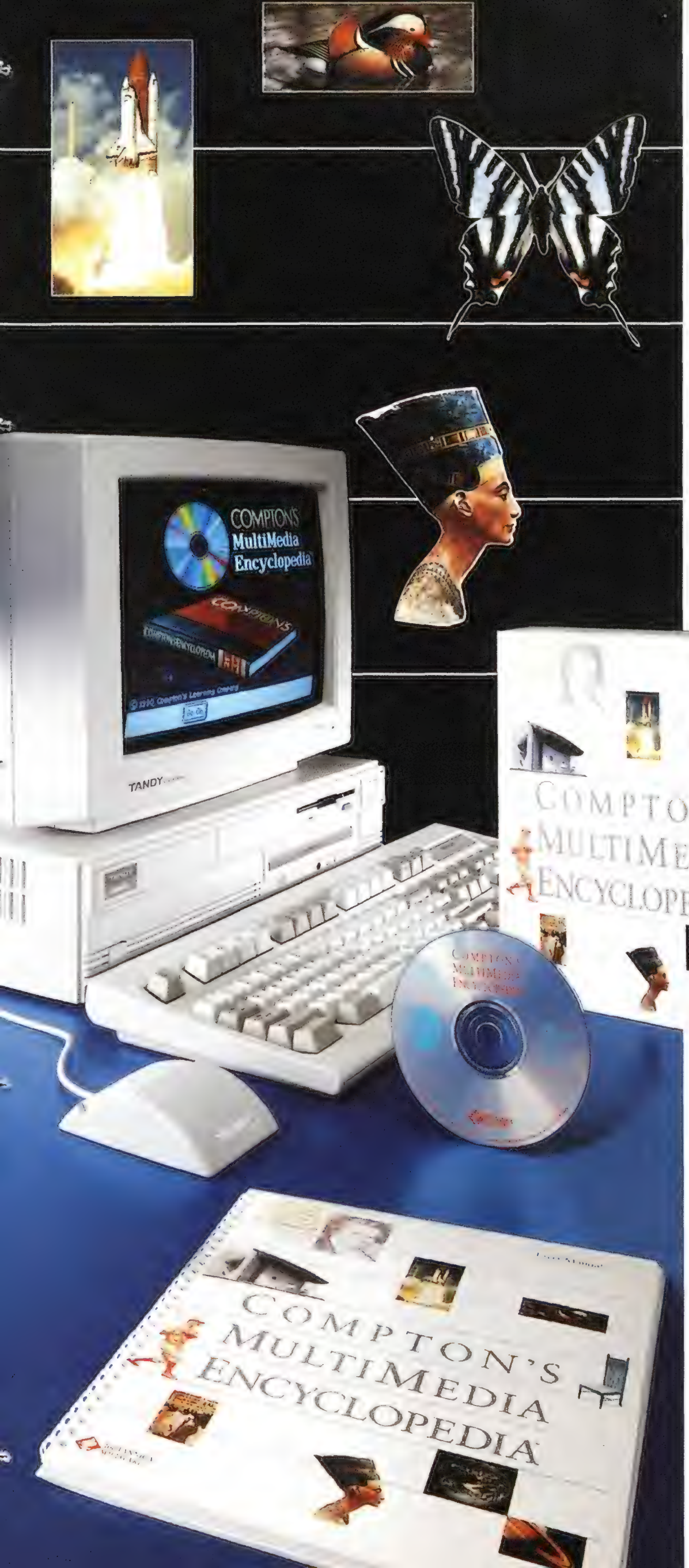
A wide-eyed innocent, I dropped in at the 157th annual meeting of the American Association for the Advancement of Science (AAAS) here in Washington last February. I spent most of my time at a symposium on human response to sea-level rise and quickly learned that everything I knew was not true. The very first speaker, Nils-Axel Morner of Stockholm University, patiently explained that sea level varies from ocean to ocean and even from one side to the other of the same ocean. In the Atlantic, it seems, the eastward-moving surface of solid Earth slides out from under the water, so that the water appears to be moving westward in what we call the equatorial current. The water piles up on the eastern coast of the Americas and there, with nowhere else to go, turns north and south, moving water and heat toward the poles.

All that water weighs a lot, and the redistribution of the weight causes Earth's rotation to slow. Then less water piles up on the west side of the Atlantic, less moves toward the poles, and so Earth speeds up again. Apparently scientists now routinely measure the spinning up and spinning down of this old planet—in units of a millionth of a second per year.

Not one to beat around the bush, Morner called it nonsense to talk about a three-foot (never mind a ten-foot) rise in sea level in the foreseeable future. There is not enough water in mid-latitude glaciers, he said. A 4-degree F increase in average world temperature would cause the water in the oceans to expand, but only enough to raise sea level four inches. (Actually it would be even less because some of the water presently on the ocean floor will not return to the surface—and be heated—for a thousand years.) The fabled West Antarctic ice sheet, which would raise sea level substantially if it melted quickly, has actually grown during past warm periods, Morner said.

I tried not to show my embarrassment for the lineup of scientists who were to speak for the next day and a half, even though the subject seemed to have been shot out from under them, but again I was wrong. It is *relative* sea level that matters. For people who live in a place where the land is sinking, the sea incontrovertibly is rising. As symposium organizer David R. Stoddart of the University of California at Berkeley pointed out after the final paper, you can find examples in the world right now of sea-level rise as great as any predicted in the global warming theories. What I learned in talk after talk was overwhelming evidence that sea level is not simple.

In the Mediterranean, for example,



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sea level rises and falls six inches or so every year, according to Victor Goldsmith of Hunter College in New York. At the western end, along the coasts of France and Spain, it rises when onshore winds pile the water there in this almost enclosed basin. At the eastern end it rises and falls each year with changing temperatures—at least in some places. Sea level is relative to what the land is doing, and in this part of the world a lot is happening. Turkey is rising, so relative sea level is falling there. Greece is sinking, so sea level is rising. Egypt's Port Said is subsiding quickly, two-tenths of an inch or so a year, and hence, to a stroller on the beach, the sea appears to be rising that quickly.

To add to the confusion, some coastal inundation has nothing to do with sea level rising *or* the land subsiding. Goldsmith showed slides of expensive houses in the Hamptons, on eastern Long Island, standing on pilings in the surf. Other scientists, he said, have shown pictures of these same houses as examples of sea level rising. But those houses are now in the water only because of normal, natural beach erosion. The sea is reclaiming one to three feet of beach a year—except where groins are. On the down-current sides of those, the beach is receding at 20 feet a year.

On the Nile Delta in Egypt, the same thing is happening. The river used to empty into the Mediterranean through the Rosetta mouth, where Napoleon's engineers found the stone inscribed in three scripts that broke the code of Egyptian hieroglyphics. In the late 19th century the river switched to another mouth, and the Rosetta portion of the delta—starved for sediment—began to erode. A lighthouse built on land by Napoleon's men now stands far out in the water, fishermen's villages wash away and the coast road is moved farther inland every few years.

Closer to home, the marshes of the Chesapeake Bay are disappearing as the water rises faster than the marshes can. Michael S. Kearney of the University of Maryland reported that land along the bay's shores is sinking at close to a tenth of an inch a year, although Portsmouth, Virginia, is going down twice as fast. Those parts of the marshes away from the channels are in need of new sediment, and as the water rises the air-dependent plants die. Open water begins to appear, and when the patches are large enough for winds to create waves, the edges begin to wash away. Open water increases rapidly, and soon a section of marsh is no more. In Blackwater National Wildlife Refuge on Maryland's Eastern Shore, for example, marshes today cover only half their historic 13,000 acres. Out in the bay, whole islands are washing away. Sharp's Island boasted a hotel in 1910; by 1950 it was barely large enough for a dozen people to stand on. Now a lighthouse stands in the water in that part of the bay, named for an island that no longer exists.

Louisiana is the most frightening example in the United States of what a sea-level rise induced by global warming might look like. Since 1942, according to tidal gauges at Houma, the water has been rising relative to the land at a three-foot-per-century pace, the same invoked in some greenhouse scenarios. Louisiana contains 40 percent of the

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nation's remaining coastal wetlands, and 30 square miles of them are disappearing every year.

The Mississippi Delta is sinking, as sediments that date back to the Tertiary Period consolidate and compact. Denise J. Reed of the Louisiana Universities Marine Consortium at Chauvin showed slides of towns built on the natural levees along the river's former passages to the sea. They are endangered: the marshes that once protected them are turning to open water, just like those in the Chesapeake Bay. Not only are the towns now open to wave erosion and storm damage, but so are the few roads that offer the only means of escape when hurricanes strike. Highway workers pile rocks along the edges and hope for the best. A few towns have completely surrounded themselves with dikes for protection, but the necessary pumping out of rainwater has also meant the inadvertent pumping out of water from the saturated soil, with the result that the land subsides still farther, heightening potential danger.

Exactly the same problems confront Chinese officials in the Yellow River Delta. Ren Mei-e of Nanjing University said relative sea level is rising there as the land subsides, partly from the pumping of groundwater, partly from subsidence following a 1976 earthquake. A network of tidal gauges in place throughout the delta since 1910 shows different rates of rise and even a couple of places where the water is falling, but the overall trend is up.

Retreat is not possible: population densities in the delta reach 1,800 per square mile, and China's third-largest city is there. Even if the people could somehow be moved, the major oilfields in the region cannot. One, which produces more than 35 million barrels a year, is already ten feet below sea level, protected by an expensive system of dikes and offshore breakwaters.

New York City turns out to be safer than I would have thought because the city has inadvertently opted for protection rather than retreat. The city's shoreline has been extended an average of 200 yards out into the water, mostly with rock fill from such monumental projects as the World Trade Center (excavated seven stories down) and the earlier digging of tunnels for the subway system. Of 500 miles of shoreline, about one-fifth has been substantially extended into the water and protected with seawalls. Unless the truly catastrophic predictions come true, brokers will have to leave their surfboards home.

New York's beaches would wash away as quickly as those in the Hamptons if left to themselves. But some draw, on a single summer day, more people than live in Delaware, Wyoming and Alaska combined. And so the city replenishes: 12 million cubic yards of sand on Rockaway Beach alone in the past 40 years. Citizens like it—and the sand keeps the sea at bay.

Now when someone at a future party lets slip over cocktails the careless statement that Albuquerque, say, is exactly 4,945 feet above sea level, I can launch into a dissertation that extends into dinner and beyond. But that might be my last party. Better I should keep all this to myself.

John P. Wiley jr.

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The object at hand

Generations of old mail-order catalogs make a colorful index to what folks prized, and paid for, way back when

Here's something that came in the mail: a brochure from the Foreign Plastic Art Company of Boston, offering a six-foot-tall plaster reproduction of the Winged Victory of Samothrace—and it's being offered for only $125.

Unfortunately, the catalog didn't come in my mail. It is dated 1904.

Just the same. I am going to start looking twice at those slick, slim advertisements that slither through my mail slot every day but Sunday. Because they are history. And luckily for us all, it turns out that a handful of prescient people have been collecting the things for years.

I have here a book that shows sample soda fountains from 1880, fantastic rococo creations with names like "The Nile," "The Citadel," "The Aphrodite" and "The Calypso." A reminder, among other things, that anyone who went to grade school back then knew some Latin and Greek and the mythology that went with them.

Here is an 1872 brochure for weather vanes: horses, roosters, cows, eagles, plows, fish, hogs, swans, cannon, shovels, flags, peacocks, stars. Weather vanes were very big in 1872. There was nobody like Willard Scott then, and you had to guess the weather for yourself. There are still geezers around who can stick their heads out the door and smell rain coming.

Remember trolleys? You probably don't, but they were quite ambitious at one time. Some 1907 timetables report on streetcars running from Boston to Newburyport, about 37 miles as the crow flies.

And ice! Before there were refrigerators there were iceboxes. And ice picks. And ice tongs. And ice ponds, where the stuff was harvested in huge blocks, and gang saws to cut the stuff into cubes the size of computer monitors, and leather shoulder pads for the ice man to rest the 80-pound chunk on as he lugged it into your house. A catalog dated 1887 brought back that whole lost world for me, right down to the chill, musty smell of wet sawdust in an icehouse and the dwindling of the cubes throughout the summer. By September they were but a cold shadow of their former selves.

Now let me note—and none too soon—where all these marvelous booklets are coming from. More than a year ago, the Smithsonian Institution Libraries (SIL) bought the Franklin Institute's trade-catalog collection, which contains 56,500 catalogs. These have just now been shelved with the libraries' main trade-literature collection, which has been put in a new mezzanine area at the National Museum of American History (NMAH), where visitors can see a selection of the catalogs by appointment. With 235,000 items, 45,000 of which can be accessed by computer, the whole thing is probably the world's largest collection of such catalogs open to the public.

"They have so many uses," says Barbara Smith, director of SIL, which, incidentally, keeps tabs on at least a million books. "Most companies don't keep archives, so we have a tremendous source of historical material about firms over the last century or so. They're also useful for historical accuracy in movies."

"This isn't just nostalgia," adds NMAH branch librarian Rhoda Ratner. "We should mention the real value of the material for serious research. Catalogs reveal detailed changes in technology, advertising, marketing, manufacturing, even the way people lived and interacted."

Ratner recalls a recent lawsuit involving an old water heater that exploded. Trade catalogs showed not only how old the model was, but precisely how it worked and whether it or the operator had been at fault.

Not to forget that you can make money on these dusty items. Some are elaborate hardcover productions. One Victorian paint company's portfolio—with mounted color chips—sold at auction for more than $13,000. Others

In the 1920s, Marshall Field & Company, Chicago's famed department store, offered bright visions of high fashion.

feature wood samples, fabric swatches, elegant gilded and silvered illustrations, full-color pictures on coated paper. Catalogs from before the 1860s offer fewer, and more-specialized, products. Indeed, they are quite rare, in part because they were printed on handmade cotton-rag and linen-rag paper. After that, wood-pulp paper came along, and catalogs could be turned out more cheaply.

This, then, is where it all started, our daily flood of glossy, pushy, unasked-for catalogs, just as the trickle of water from Lake Tear of the Clouds in the Adirondacks became the mighty Hudson River. The first useful wood-pulp process involving caustic soda was invented in 1852. City free delivery of mail began nationally in 1863, and rural free delivery in 1896. The money-order system dates from 1864. Aaron Montgomery Ward sent out his first catalog in 1872. Richard Sears, who became half of Sears, Roebuck and Company, sold his first consignment of watches by mail order 14 years later. Thus was born catalog consumerism as we more or less know it today.

Everything seemed to conspire to encourage trade catalogs: the frantic industrial expansion following the Civil War, the Westward movement of the railroads, cheaper postage, not to mention the mail-order boom itself—something that scholars have described as "the greatest single influence in increasing the standard of American middle-class living."

By the 1920s Marshall Field's, the Chicago department store, was putting out a quarterly magazine, *Fashions of the Hour*. It is charming, with slinky drawings of 1920s gowns by Paquin and Lanvin, ads for damask linen tablecloths for $13.50, travel articles (go light, is the advice; bring only a steamer trunk, suitcase, overnight bag and hatbox). It even offered an instructive 1924 piece on game playing ("Short sleeves are in again, and very well suited are they, to mah-jongg"). A page of history, all right.

I come across a picture of the Lionel Barrymores, in town to do *Laugh, Clown, Laugh* on the stage. That one kind of gets you, if you knew Barrymore in the movies as an old guy in a wheelchair. He was the walnut-faced villain, you remember, in *It's a Wonderful Life*. Not only is Barrymore standing up here, with no wheelchair in sight, but he has not a gray hair on his head.

Now, take this issue of a catalog I got in the mail not long ago. Check out the Giant Lyte Electronic Kaleidoscope ($1,795) and the full-scale traffic light for your office ($249) and the Quacky Wood Duck Phone, a telephone shaped like a North American wood duck, whose quack announces the call, "and for extra excitement his eyes light up, too" (only $75).

And there are toy cars for adults, radar detectors, tanning lamps, tiny hair dryers, electronic notepads, and plush parrots that talk back to you in your own voice.

Don't laugh. That stuff is the stuff of history, too. I'm just glad I won't have to write this story 100 years from now.

Michael Kernan

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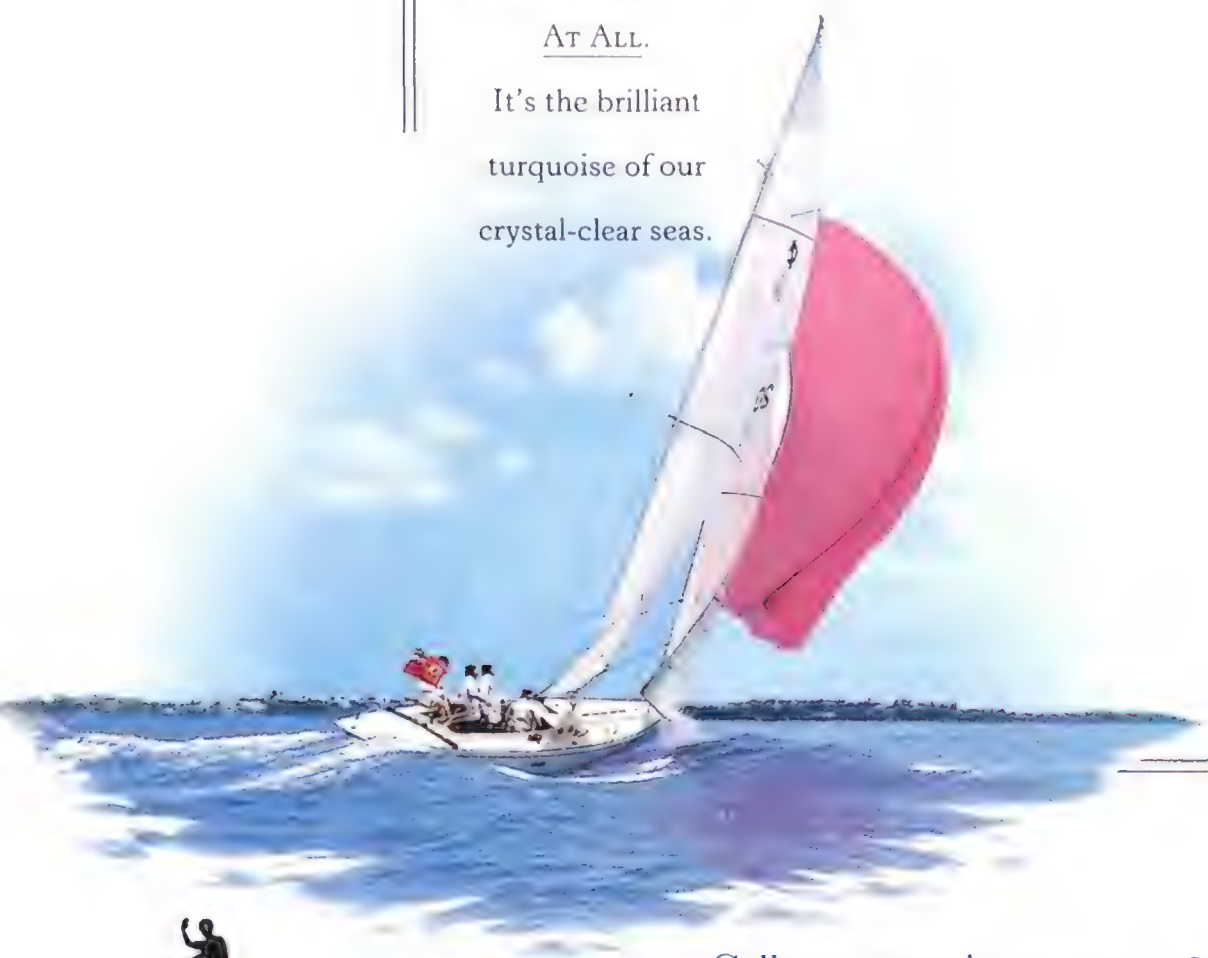

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Ganados co-op members (opposite) sort sheep from common flock that has grazed during the woolgrowing season. Above, the co-op's leaders, Maria Varela and Antonio Manzanares, see their grazing land vanishing.

By Donald Dale Jackson

Around Los Ojos, sheep and land are fighting words

In New Mexico an old Hispanic culture based on raising sheep and weaving now finds itself at odds with the state and environmentalists

Maria Varela was 27 in 1967, already a tough and politically savvy veteran of the civil rights wars with the tattered triptych to prove it—Selma, Meridian, Canton—and she was at a crossroads. The movement was shifting North, away from the rural South where she'd spent five dangerous and exciting years working for SNCC (Student Nonviolent Coordinating Committee). Her friend Julian Bond had introduced her to Reies López Tijerina, leader of a cadre of Hispanic land-grant activists in New Mexico, and Tijerina had invited her to put her talents as a writer-photographer and fundraiser to work for him.

Maria mulled her options—Cesar Chavez's United Farm Workers Organizing Committee wanted her to help unionize California farm workers, and another movement revving up in southern Texas also interested her; "there was a lot going on in 1967." She decided on New Mexico. She arrived in the scenically magnificent, chronically impoverished Chama Valley four months after Tijerina led a doomed raid on the courthouse in the ramshackle village of Tierra Amarilla, an event forgotten now by almost everyone but New Mexicans.

Antonio Manzanares was a 16-year-old high school athlete at the time of Tijerina's short-lived raid. He remembers it mainly because his mother worked at the courthouse and escaped by jumping from a first-floor window. Antonio, whose family had lived in the valley for more than a hundred years, was as insulated by background as Maria was worldly: he had been to Colorado once and to Santa Fe, but never to Albuquer-

Photographs by Terrence Moore

que. He had been told that Tijerina was a Communist.

Maria had come to Rio Arriba County with a fully formed political philosophy. On social-justice issues, she believed, government was an obstacle, not an aid. Reality, she had concluded, was "communities getting together around issues that oppress them." She had zeroed in on land as a cause. "I wanted to make a difference, and the struggle to retain land and water seemed to me to be worth spending whatever I had to spend. I saw the loss of land at the root of a lot of social ills."

If Antonio Manzanares had an ideology in those years it was limited to an identification with the underdog, though he grew up feeling neither poor nor oppressed. His paternal grandfather had been county sheriff, his father worked for the school system. Antonio's parents sent him to a boarding school where his maternal grandfather had once been janitor. He did well enough—finishing as both student council president and second in his class—that he entered the University of New Mexico in 1969, the first in his immediate family to attend college. His sole role models were teachers—"the only educated people I knew"—and he graduated with a degree in psychology. Afterward, "I was lost. I came home, did some substitute teaching and helped the track coach."

Maria, oldest of five daughters of a Mexican-born chemical engineer and an Irish-American mother, had grown up in a succession of Eastern and Midwestern cities and attended a Catholic girls' high school in Chicago. After graduation from Alverno College in Milwaukee, where she was student body president, she went to work for a Catholic social-action group called Young Christian Students. Two years later, in the summer of 1963, she went South.

"It was a wonderful time," she recalls. "We learned to do so many things, but there was always an edge of danger. We took nothing for granted." In Selma she worked underground, preparing blacks for voter literacy tests. As a staffer for SNCC in Mississippi she was twice jailed ("I first read science fiction in jail") and once chased by a carload of gun-toting rednecks, outrunning them in her 1957 Packard. Most civil rights activists ultimately took mainstream jobs or otherwise left the movement, but not Maria. "I'm in for the long haul," she says. "The movement raised a lot of questions about democracy and left them unanswered. I needed to find those answers."

Antonio, still unsure about a career, knew that whatever he did, he wanted to do it in the Chama Valley. To him, the clear, high-country streams and lush meadows flanked by gentle, pine-blanketed slopes were more than beautiful, they were home. "People move away from here and all they talk about is coming back," he says. Robert Torrez, a valley native who is now New Mexico state historian, believes that the bond between Hispanics and their land is extraordinarily strong. "As a race we think of land differently," he says. In the Chama Valley one result is the diminishing size of landholdings as successive generations stay home and divvy up family ranches.

Behind the historic adobe home of Tierra Wools in Los Ojos, the wool washing and dyeing operation is run by co-op member Sophie Chavez, who is stoking fires under vats of dye with local, long-burning piñon wood.

Antonio drifted into sheep ranching in the late 1970s. The men in his family had always raised sheep, usually to supplement wage jobs. He started that way too, but by the time he married the daughter of a local rancher in 1979 he owned 90 sheep and felt ready for a fling at full-time ranching.

Maria had been in the valley a dozen years by then. After breaking with Tijerina in 1968 she had helped start La Cooperativa Agricola, a privately funded operation offering various services and programs to the poor, and had then become director of La Clinica, the medical clinic that was its most successful offshoot. She was inventing her career as it unfolded, honing her skills as a grant-application writer along with her taste for fishing mountain streams, often with her husband, Lorenzo Zuñigá jr., whom she married in 1977.

She had turned down a job running VISTA (Volunteers in Service to America) in the Carter Administration that same year. "They were in long skirts and I was in jeans," she remembers. "It wasn't for me. I didn't believe government could do anything for communities anyway. I think that experience sealed my commitment to New Mexico."

When she left La Clinica in 1980 to have a child, Maria was thinking about ways to keep land in the hands of local people. Her goal was a homegrown enterprise that would use local resources rather than investment and development from outside, ideally an enterprise that would both create jobs and preserve the region's cultural identity. She and her neighbor Gumercindo Salazar, a teacher and part-time sheepman, began to focus on sheep and wool as the answer. Salazar suggested she get together with his *amigo* Antonio Manzanares.

The holdover 1960s radical and the apolitical sheepman eyed each other warily at first. "I'd seen her around," Antonio recalls. "A lot of people thought she was, you know, a subversive. Well, she is—in a good way." Maria, for her part, wondered about Antonio's willingness to commit to a collective project. "It wasn't an easy relationship," she says.

The idea that evolved through long months of late-night discussions was a nonprofit cooperative that would raise sheep, and employ housewives and other local women to weave clothing and rugs from the wool, in traditional Southwestern motifs. They incorporated in 1983 as Ganados del Valle—Flocks of the Valley. "Maria was the visionary, she put things in a romantic and eloquent way," Antonio remembers. "I was the pessimist, just trying to make a living. The idea made sense, but I wasn't sure people would accept it."

Maria envisioned a business that was at once old-fashioned, in its fidelity to hand-spinning methods, for example, and modern, in marketing techniques. The discovery of mixed-blood remnants of churro sheep in the Ganados flocks provided a tidy way to serve both ends. The long-wooled churros, descendants of animals brought to New Mexico by Spanish settlers in the 16th century, produce wool and meat that are both distinctive and expensive. Ganados collaborated with

At center are a throw and striped Rio Grande rugs, works of weavers who have learned traditional patterns.

In summer, members like spinner Margaret Martinez discuss their skills and demonstrate them for visitors.

Lyle McNeal, a Utah State University professor anxious to preserve the nearly extinct sheep, in establishing a successful breeding program funded by grants (SMITHSONIAN, August 1983). Today the churros, with their somewhat cockeyed-looking four-horned rams, make up about 25 percent of the Ganados members' flocks.

The fledgling co-op sought the help of professional weaver Rachel Brown of nearby Taos in training weavers and opening its own store to sell the coats, blankets, pillows and other products that they made. Brown introduced the spinning wheel to women who had traditionally used a hand spindle, or *malacate*, to spin yarn, and gave them lessons at the old church in the village of Los Ojos. With just two wheels and four looms, the weavers founded a retail business, Tierra Wools, and sold $11,000 worth of handmade goods in their first six months.

Nurtured by the unpaid efforts of its founders and some small donations, Ganados blossomed. It established a lamb-marketing business and bought another building for a store and coffeeshop. It launched a children's art program to cultivate the native arts the weavers exemplified. Robert Redford gave the co-op the rights to organize the premiere of the New Mexico-set film *The Milagro Beanfield War*, which he directed. Ganados used the proceeds to create the Milagro Fund, which backs bootstrap projects in other rural New Mexico communities. By 1989 Tierra Wools employed between 25 and 30 people and was selling close to $200,000 worth of woolens annually. Maria "the subversive" now spiked her conversation with sales-conference phrases like "targeting short-term opportunities" and "marketing missions."

The Ganados charter also demanded protection of the still-unspoiled land on which the co-op's hopes rested. The members pressed successfully for stringent subdivision regulations and led the fight against a proposed ski-resort development. "This has always been a land-based culture," Maria explains. "It's only common sense to hold on to that in trying to take charge of our lives and preserve the culture. We can't trash our past for some promise of a glittery future."

For Maria the most heartening success of Ganados was the flowering of the women. Many were shy and passive when they began. "I learned not to push, to wait till they were ready. One woman could hardly take her eyes off the floor when we started. Now she's making speeches. Another said all she could do was crochet, and she became the store manager." Maria was both catalyst and role model. "The women want to be strong like she is," Antonio says.

Antonio knew from the outset that land, specifically access to grazing land, would be the make-or-break test for Ganados. With the loss of community grazing land more than a century ago, the small home ranches along the sparkling Rio Chama, sliced up repeatedly over the years, couldn't provide enough forage for summer grazing and crops for winter feed. He and the

Ganados flocks are reviving the once-threatened churro, known for greaseless wool and ram's horns.

Self-taught marketing specialist Pat Quintana sells Pastores Lamb to specialty shops, gourmet restaurants.

Sheepherder Martín Romero, 80, sees no conflict between sheep and elk. "I've seen them graze and drink together all my life. If you watch the sheep and keep moving, they don't hurt the range for wildlife."

other small-scale sheep owners in the co-op needed access to the high grasslands that rim the valley. This meant negotiating annually for grazing permits with the large landowners who owned the high country.

The yearly scramble began in February or March. Antonio, who owned the majority of the co-op's flocks, tried the 15-odd possibilities. Mostly the answer was no; landowners with range to rent preferred cattle, which paid them better. One year he managed to get a temporary grazing allotment on U.S. Forest Service land; another year the putative ski developer came through in what he termed "a gesture of friendship"; a third year the sheep wound up on the Jicarilla Apache land on the western side of the valley.

Some years the uncertainty persisted into May and June as the growing flocks exhausted the hay supply and gnawed the spring grass. Antonio and his wife, Molly, talked often of selling out. "It's exasperating," he says, "it's exhausting emotionally and physically. You can't plan, and your operation is always helter-skelter." The worst of it was not knowing, frequently until the eleventh hour, whether they would stay in business another year.

One high-country landlord Ganados dealt with regularly was the New Mexico Game and Fish Commission, owner of three wildlife management areas totaling 45,000 acres in the mountains adjoining the Chama Valley. The commission sets the policy for the three areas—W. H. Humphries, Edward Sargent and Rio Chama—mainly for elk, which in turn are managed primarily for the state's $365 million (annually) hunting and fishing industry.

For Hispanics with roots in northern New Mexico this was particularly galling, because the wildlife areas are part of the long-disputed common lands of the Tierra Amarilla land grant. As State Historian Robert Torrez explains, the trouble over the Tierra Amarilla grant began with an 1860 decision by Congress mistakenly classifying the 594,515-acre grant as private rather than as a community land grant, which it had been under Mexican law and tradition. Hispanic ranchers continued to use the common grazing lands there until

While in New Mexico, author Donald Jackson had a "memorable encounter" with Benjamin, an angry ram (opposite) who didn't want to be photographed.

Having led their flocks onto a state wildlife area, Ganados members attend a reconciliation meeting.

landowners began erecting fences early in this century.

The anger and resentment that flared then and later, resurfacing most dramatically in Tijerina's 1967 raid, has never really subsided. "The government never ruled on it one way or the other," Torrez says. "They tried instead to sweep it under the rug. Land grants may be historic phenomena in some places, but in New Mexico they're current, part of everyday life."

Ganados repeatedly asked permission to graze the wildlife areas. The New Mexico Department of Game and Fish, the commission's administrative and enforcement branch, denied the requests on the grounds that sheep and elk were incompatible; the sheep would compete with the elk for forage. "It's like your kinfolk opening your refrigerator door," explains Game and Fish director Bill Montoya. "They eat the good stuff first. That's what the sheep do." Montoya's view reflects a widely held belief that sheep destroy grasslands, and in fact there have been many cases of such overgrazing. But it's an undeserved reputation, Utah State's Lyle McNeal explains: the confinement of large numbers of any hoofed animals can result in severe overgrazing.

The commission's mandate, moreover, was wildlife, not livestock, Montoya adds. If they allowed sheep on the preserves, they risked the loss of federal subsidies channeled through the U.S. Fish and Wildlife Service. To Antonio, this is where the injustice really lies, since other ranchers had been allowed to graze livestock on some restricted lands until Ganados asked for access too—then the land was placed off-limits.

Maria found scientific evidence suggesting that in certain controlled circumstances sheep actually *improved* the range for wildlife. She and Antonio proposed that Ganados and the Department of Game and Fish do a joint study to confirm or refute this thesis on the wildlife areas, but the department wasn't interested. They lobbied Senator Pete Domenici and Representative Manuel Lujan jr., now Secretary of the Interior, to no avail.

On the land-grant issue Antonio and Maria had to walk a tightrope between their sympathies and political discretion. To their critics Ganados represented Tijerina's heirs in sheep's clothing. "They were afraid we'd get on that state land and never get off," Antonio says. Some state officials say privately that they believe the land-grant movement drives Ganados. The more militant residents of the valley felt Ganados was too slow in acting.

Antonio and Maria try to maintain a discreet gap between themselves and the activists. "Everyone knows the land-grant story," says Antonio. "But we're not raising it. What we're looking for is a home in our homeland." "We're not a political-advocacy group," Maria says, adding with a smile, "but they're our *compañeros*."

In the spring of 1989 Antonio made the usual inquiries and got the usual replies—no range available, the leases gone to cattlemen. The manager of one large ranch waffled for six weeks before turning him down. Once again Antonio and Molly discussed selling. Then, in late May, the Jicarrilla Apache tribe agreed to

With leaders of environmental groups, politicians and others, they seek an as-yet-undetermined solution.

lease some grazing land on a month-to-month basis. Desperate, Antonio accepted.

Maria went to Washington in June to meet with U.S. Fish and Wildlife officials. Hoping for federal backing for both emergency grazing in 1989 and a long-term plan, she came away with little more than a promise to listen to a research proposal. Pat Quintana of the Ganados staff, who had once worked as a range technician, meanwhile began work on a management plan for a carefully timed grazing program on the wildlife areas. In late July the Jicarillas wrote Antonio that the sheep had to be off their land by August 17. To Antonio the letter was "like a message from God." It was showdown time.

Antonio had often contemplated moving the sheep onto one of the state wildlife areas, but outlawry didn't come easy for him. "I'd never stolen anything, not even a pencil. I'm not comfortable breaking the law. And I realized we could lose it all. But I was also thinking we had to stand up for what we believed. If there was ever a time to do it, this was it." The cautious stockman who saw both sides of most issues was ready to commit civil disobedience.

The dozen other growers with sheep in the Ganados flocks were not so sure. Several felt vulnerable because they had jobs with the state, the schools or the county. Ganados appealed to the commission for an emergency 30-day grazing permit, but it turned him down. "My people were taking one step forward and two back, but gradually they realized we had no alternative," he recalls. Even Maria was uncertain at first, fearful that one rash act could topple the fragile structure they had so carefully erected. The woman who had faced down racist goons saw this decision as "the hardest thing I ever had to do." She and Antonio seemed to have executed a subtle role reversal: the subversive and the conservative had switched jackets.

When the commission denied their request for an emergency permit the Ganados membership finally fell in behind Antonio. Late on the night of August 17 they moved roughly 1,000 ewes and their lambs across ten miles of rugged country onto the W. H. Humphries Wildlife Management Area. Maria publicly announced the move at a meeting of the commission. "What we now undertake, we do not take lightly," her statement said. "We have nowhere to turn. . . . It is in our long-term interests for these wildlife areas to flourish. But you cannot tear these wilderness areas out of the fabric of the communities which surround them."

Officers from the Department of Game and Fish in a state airplane spotted the trespassers two days later. "We were pretty much waiting to be found," Antonio recalls. "It was hard to hide that many sheep. But we kept changing hats, turning our jackets inside out and moving around, so they'd think there were more of us." Montoya, directing the state response, kept the gloves on. "I didn't want a fracas," he says. "I wasn't going in with Winchesters." A half-dozen mounted officers dispatched by Montoya found Antonio, Molly and the then 78-year-old herder Martín Romero the next day. After a few minutes of affable small talk the officers explained that they were trespassing and warned Antonio to move out of the wildlife area. He said he'd consult his partners.

"The young men don't want to leave town"

To Martín Romero, a mahogany-faced, slow-moving old man who has been herding sheep in these mountains since he was a boy, the whole brouhaha seemed a little foolish. He remembers this country before it was fenced: "It was free then. I'd stay out by myself eight, nine months at a time." The uncomplaining Martín was among the last of his breed. "The others are mostly gone now," he explains. "The young men don't want to leave town. Me, I like it. I forget all about town the second week I'm out." Martín sees no conflict between sheep and elk. "I've seen them graze and drink together all my life. If you watch the sheep and

keep moving, they don't hurt the range for wildlife."

The Ganados board members decided that the sheep could stay put until they had somewhere to go. Maria, discussing the "rules of the bust" with the Game and Fish men, was experiencing 1960s déjà vu. "The weavers were willing to go to jail. The officers kept saying they didn't want to arrest anybody. These guys were gentlemen." Finding Antonio and the sheep still there the next day, the rangers cited him for criminal trespass. Gov. Garrey Carruthers and Commissioner of Public Lands Bill Humphries scrambled up a short-term solution—the sheep could graze on a nearby state park for a few weeks.

The Ganados gang was now national news. They had turned up on network TV, and a national radio correspondent had accompanied them on horseback as they trespassed. Antonio had held a well-attended press conference in a meadow on the Humphries wildlife area. But they still hadn't found a long-term home for their sheep. And the State of New Mexico still had no idea what to do about them.

The governor appointed a ten-member task force representing various viewpoints, chaired by agricultural economist John Fowler of New Mexico State University, to conduct a study to find out whether livestock could enhance habitat for wildlife. The scientific wisdom on the question, such as it was, was inconclusive and contradictory. Fowler found scholarly treatises on both sides, though none zeroed in specifically on the semiarid high-country ecosystem of northern New Mexico. Fowler hypothesized that if the timing and grazing intensity were carefully controlled, sheep might enhance the elk's habitat.

But he never got the chance to prove or disprove it. The task force degenerated into polarized wrangling so intense that the research plan dissolved in the heat of combat. Some members considered the study's $2.9 million price tag too high, but the main problem was whether sheep would be allowed on the wildlife lands for purposes of research. The state land managers, supported by the environmentalists on the panel, said no. Ganados and Fowler, arguing that any other plan made no sense, said yes. "It became a Catch-22," Fowler says. "The research wouldn't be valid if we couldn't go on the areas, but we were barred from those precise areas. It was an education for me."

Maria and Antonio, blinking in the spotlight's glare for the first time, found themselves at the epicenter of an intensifying debate with international ramifications. The question they raised, in essence, was whether indigenous people in a poor area have a right to use public land or land they once held in common for their own sustenance, even when that land has been set aside for the unarguably commendable purpose of preserving wildlife and biodiversity. It is a debate certain to escalate as the question is asked in Africa, South America and elsewhere. Which is the greater good? Can the two be reconciled?

Historian Robert Torrez says Hispanics have deep roots: "As a race, we think of land differently."

The sheep raisers feel surrounded

Their debut in the public eye also exposed the Ganados team to a critical scrutiny they hadn't experienced before. Even if sheep were shown to be compatible with wildlife on the state preserves, critics asked, why should Ganados have the first call? Why shouldn't they bid for leases like everyone else? Other ranchers in the same circumstance sold their stock; they could too. Ganados obviously had a hidden agenda, others said—they wanted the land grant back. Environmentalists, committed to protecting what little of the West is left from further abuse, fretted about the precedent: if Ganados sheep were allowed on wildlife land, the floodgates would open.

"We're surrounded," Antonio complains. "We've got hardcore environmentalists, the Department of Game and Fish, the hunters, traditional Anglo ranchers, land-grant people and Hispanic rights groups on all

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sides—everyone has an agenda for us. Then there are the racists who feel threatened by us. Finally there are our own people with a little money who got embarrassed when we broke the law. That's what hurt me the most."

Maria was rankled most by the opposition of environmentalists like Bill Waldman, New Mexico director of the Nature Conservancy. The Conservancy bought one of the three disputed wildlife areas originally and resold it to the state. Waldman points out that provisions in the deed of conveyance forbid grazing on the preserve as incompatible with wildlife. In his opinion "the available scientific research" leads to the same conclusion. Maria sees the facts differently. The words on the deed say the land shall be managed solely for wildlife, and she sees grazing, which is never actually mentioned, as a management tool.

"I always thanked God for the environmentalists," Maria says. "They learned how to operate politically like we in the civil rights movement did. We ought to be together in fighting development, which is the real enemy of wildlife. But I don't think they want to be bothered with people. To them animals are the new 'noble savages,' like Indians once were to some people." Maria, who has a gift for invective, stung Waldman when she referred to her foes as a "green wall" of bureaucrats and environmentalists. "I wish she worked for us," he allowed. Ganados and the environmentalists have begun meeting in recent months to explore possibilities for working together.

The Ganados battle has left some environmentalists uncomfortably ambivalent. "This is the first time I felt like the heavy," says David Henderson, the National Audubon Society's New Mexico representative. "I've supported the commission because I'm a professional advocate for wildlife, but we've made some myopic decisions in our desire to protect wildlife. We haven't considered the human factor as much as we should. Maybe there should be more flexibility." Henderson believes that a solution benefiting both Ganados and wildlife can be found.

If so, it hasn't materialized yet. The Game Commission formally spurned Fowler's research proposal in December 1989, and the commission's chairman at the time, Gerald Maestas, took the opportunity to tongue-lash Ganados for breaking the law. "He said 99 percent of the mail was against us," Antonio recalls. "I just took it. He intimidated me." The state, however, eventually dropped the trespass charge.

The search for summer range was as tough as ever in 1990. Antonio and Martín grazed the sheep on one ranch for part of the summer, then moved the flocks to another spread. Once again Antonio contemplated selling. "But I think we have more strength and support since the confrontation," he says. "There's a Spanish saying, *No hay mal que por bien no venga*. It means nothing's so bad that good can't come from it." Maria may be living proof of this proverb: she received a MacArthur Fellowship in July—a five-year stipend that will total $305,000.

Ganados' success in restoring the community's vitality has netted other important supporters. Bill Humphries, a Rio Arriba County neighbor who until recently was commissioner of public lands, thinks that

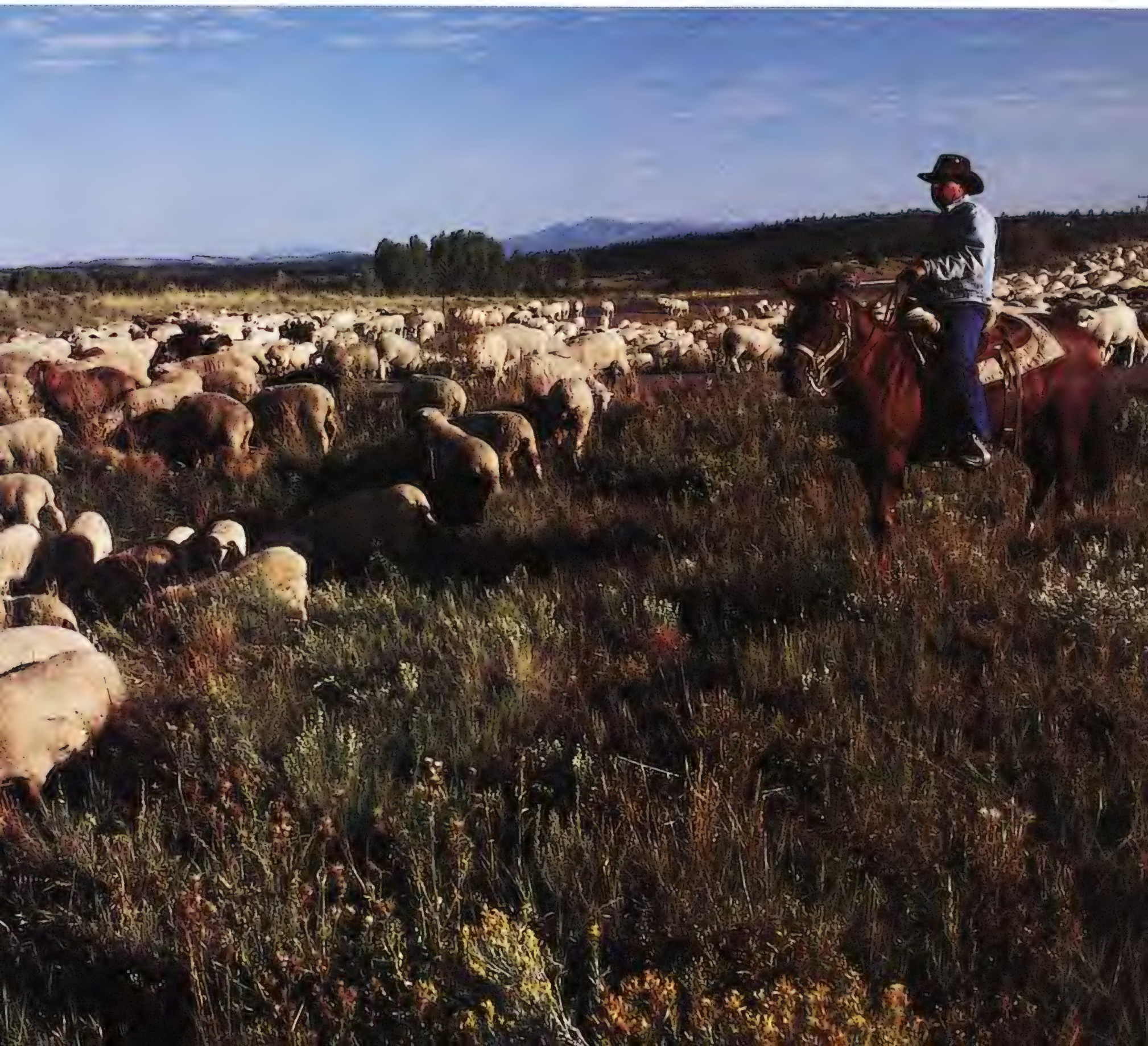
Out of options, Martín and Antonio brought the sheep in early last fall to eat into the winter's hay supply.

good management can insure the group's future while protecting wildlife. "People say they're asking for special favors," he says. "OK, but we've helped half the world at some point. Ganados is people trying to help themselves and their culture, and they deserve our support. I think the wildlife areas can adapt to a reasonable number of sheep."

Lynda Taylor of the Southwest Research and Information Center in Albuquerque, an environmental- and community-advocacy group, suggests state initiatives such as credits or subsidies to give Ganados a leg up. "We've done it for farmers and oil companies," she argues. "Ganados is providing jobs in a poor community, it's weaving culture and history into its economic development, and it can be a model for a new generation of conservation-minded ranchers."

Maria's dream for Ganados includes not just access to the wildlife areas but acquisition of a ranch-size chunk of land, perhaps 10,000 acres, which would cost several million dollars. She would eventually like to move into cattle and specialty farm crops. How long will all this take? "I've only recently realized that it takes two or three generations for a community to take control of its own destiny," she says. "So we might be around awhile."

Antonio, ever the down-to-earth realist opposite Maria the visionary, sees it in simpler terms: "What Ganados is about is economic and cultural survival."



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Investigator Dave Dick keeps close watch on pair of suspected egg robbers trudging across a Scottish moor.

By David M. Schwartz

Britain's birders are cracking down on outlaw eggers

Employing tools and tactics of hard-boiled private eyes, bird lovers in the British Isles are landing egg collectors in hot water

Big wet snowflakes blotch the windshield of the parked car and splatter across two telescope barrels poking surreptitiously out the side windows. For late May, the weather is abysmal. In the driver's seat, Dave Dick pulls his balaclava down over his ears while he squints through his scope. Directly behind him, his assistant, Stuart Benn, removes a glove only long enough to jot map coordinates in a notebook. Dick focuses his glass and chuckles. "I take immense consolation in knowing *they* must be absolutely frozen!"

"They" are two distant figures in parkas and Wellingtons, hunched against the wind and treading slowly across the moor. When one turns and raises his binoculars toward the road, Dick and Benn scramble to pull their scopes into the car. "We know these two," says Benn in his Scottish brogue. "They're very sensitive to surveillance."

The car is parked at an elevated outlook on the A836, a single-track road that cuts through the Flow Country of Caithness at the very top of mainland Scotland, almost as far north of London as the Pyrenees are south. Nearly a million boggy acres cloaked in drab-brown heather, punctuated only by elongated drumlins and small black-water ponds (*cnocs* and *dubh lochans*, in the local Gaelic), this is the world's largest expanse of "blanket bog," a unique and desolate ecosystem far more alluring to nesting birds than to tourists. But rare species of shorebirds, waterfowl and divers (loons) draw one species of tourist hell-bent on thwarting the interests of birdlife, despite a bevy of laws to the contrary. And these troublemakers, in turn, draw Dave Dick and Stuart Benn, equally hell-bent on thwarting *their* interests.

Dick and Benn are investigators for the Royal Society for the Protection of Birds (RSPB), Britain's oldest and largest private nonprofit conservation organization. The two blokes sloshing about on the Flows are, as far as Dick and Benn can tell, egg collectors.

Like some scriptwriter's fanciful cross between Sherlock Holmes, James Bond and Doctor Dolittle, the RSPB's six professional investigators—ornithological detectives, if you will—work with police and customs officials to identify and prosecute those who illegally disturb, shoot, poison, trap, sell or possess wild birds or their eggs. They meet secretly with informants, poke through files and wastebaskets for clues, search (and occasionally tail) cars believed to be carrying avian contraband, and stake out nest sites likely to be robbed. If it will help protect the nation's avifauna, they're not above a dirty trick or two, like "surreptitious demobilization" (also known as letting the air out of tires). The RSPB's brand of derring-do employs an arsenal of high-tech equipment: infrared-sensitive Starlight Scopes, cellular phones, a van outfitted with one-way glass and sophisticated radio equipment, and climbing gear for use in returning purloined goods to the aerie.

On this particular day, nothing more complex than telescopes is required, but by midday Dick and Benn have concluded that they need to move closer, even if it

As lovely as rare stones, guillemot eggs are stored as evidence at Royal Society for the Protection of Birds.

Branches of osprey nest tree in Scotland were sawed off despite barbed wire installed to thwart eggnappers.

means that they too will have to get absolutely frozen. They leave their car and head for the hills on foot. Their hope is to espy the "eggers" in the act, then notify a constable, who will charge them with violating the Wildlife and Countryside Act, Parliament's most potent law protecting native fauna from a multitude of sins, including egg collecting.

This was not my first encounter with the odd notion that grown men can derive immense pleasure from robbing the eggs of nesting birds, blowing out their contents, and displaying the trophies in their homes like stamps, coins or antiques. A year earlier, I had toured The Lodge, a baronial estate in Bedfordshire, England, that is the national headquarters of the RSPB. "It seems to be a uniquely English preoccupation," explained Andrew Jones, head of investigations for the RSPB. "Egg collectors are almost never Scottish, Welsh, Irish, German or American, although they sometimes visit those countries in pursuit of their obsession." He led me through the cluttered storeroom where confiscated evidence is held for upcoming trials. In stacks up to his chest, drawer upon glass-topped drawer packed with eggs attested to a thriving hobby that defies both the conventions and legalities of today's conservation consciousness.

"We are not particularly concerned with schoolboys who put a few robin's eggs away in a cigar box," Jones said. "Usually that instinct dies out at adolescence. Occasionally it develops into something like this." He lifted the drawers to reveal their contents. There were tits' eggs smaller than marbles, and swans' eggs larger than baseballs; the round eggs of owls and the conical eggs of sandpipers; eggs in white, brown, blue, green, gray and gold—enough shades to stock a paint store—all arranged in clutches, just as they had been found in the nest. There were eggs from backyard species, and eggs from birds deemed "specially protected," Britain's term for endangered species.

More stress on birds in trouble

"Egg collecting is rarely the initial cause of a species' decline, but by focusing on the rarest birds, egg collectors can cause irreparable damage," Jones explained. "We recently prosecuted a man with 39 clutches of red-backed shrike eggs, all taken in the last 15 years. Right now in the British Isles there are only one or possibly two breeding pairs of red-backed shrikes."

A week after our discussion, acting on a tip, Jones and his colleague Karen Bradbury enlisted the help of local police in executing a search warrant at the home of a man named John Hemmings. A disapproving relative had contacted the RSPB to report that Hemmings had taken eggs from the aeries of golden eagles. They found some golden eagle eggs all right—and

Photographs documenting collectors in field show Kirk-Swann at Romanian vulture nest in 1925 (left), Coltart holding a raven's egg in Wales in 1937, and Black suspended near cliff aerie in England in 1914.

about 26,000 others, including eggs from some of the world's most endangered species. It was the largest private egg cache ever uncovered, and when the case went to court, it cost Hemmings $16,000 in fines and legal fees, and the ignominy of national media attention.

At one time, egg collecting was both respectable and legal. In Britain and abroad, it reached its heyday during the Victorian era, when all manner of natural history specimens were standard fare in the drawing rooms of the gentry. In the United States too, until the early decades of this century, eggs were collected with a passion and devotion akin to that of today's birdwatchers. Oology, as the study of eggs and nests is properly known, has claimed among its ardent enthusiasts some of America's most eminent ornithologists and conservationists, including Presidents Theodore and Franklin Roosevelt; ornithologist Arthur C. Bent (of Bent's *Life Histories*); the second Secretary of the Smithsonian Institution, Spencer Fullerton Baird (of Baird's junco, Baird's sandpiper and Baird's sparrow); and T. Gilbert Pearson, a longtime president of the National Audubon Society.

For America's oologists there were advertisements of eggs for sale and swap, catalogs, master price lists and gold-medal competitions at fairs. There was also fraud: mute swan eggs passed off as those of the California condor, roadrunner eggs splotched with brown shoe polish and sold as snail kite eggs. Two magazines, the *Oologist* and the *Journal of Comparative Oology*, provided nesting information, technical advice, and anecdotes of pursuit and triumph, interspersed with agonizing accounts of failure. In 1889, for example, a collector named Maurice Thomson discovered that rarest of treasures, a clutch of ivory-billed woodpecker eggs, only to accidentally knock the eggs out of the nest and watch in horror as they fell to the ground.

One of oology's most memorable tales is that of Maj. Charles Bendire, egg collector and Indian fighter who, in 1872, was spotted by Apache while pilfering an egg from a zone-tailed hawk's nest in Arizona. To protect his prize he shoved it into his mouth, climbed down the tree and galloped back to camp—where, gagging and gasping, he found he couldn't spit it out. Several men had to be enlisted to pry open his jaws and gently extract the trophy. Bendire later became the first curator of oology at the Smithsonian, where the storied egg survives to this day, along with about 130,000 others.

Egg collecting died out in America with the Victorians. The excesses of some expeditions—500 great blue heron eggs taken in the Thousand Islands, 3,000 in the Everglades—gave it a bad name, and wildlife appreciation was beginning to be linked with a concern for the perpetuation of species. By the 1940s, virtually all amateur oologists in America had traded their climbing irons and egg-blowing equipment for binoculars and cameras. Permits became necessary to collect for scientific purposes; commercial trade was outlawed. Private egg collections, so lovingly and painstakingly

David Schwartz traveled some 3,000 miles west and east of his Connecticut home for this article. The only eggs he collects are from chickens.

Dick and assistant Stuart Benn (right) maintain low profile while monitoring the activities of two suspects.

Benn looks on while Dick shows constable evidence of fowl play he found buried in a gravelly stream bank.

The eggs that Dick found had been wrapped in tissue for protection and also to make them easier to find.

assembled, were tossed, buried, stashed in attics or donated to any museum that would accept them.

But in Britain it is another story. Though the laws have changed, the dedication to oology has not. Peter Robinson, former chief of investigations for the RSPB and now retired, believes that at least 500 of his countrymen, many of them members of a secretive oology society, are still carrying on with their anachronistic idea of a plundering good time. He views the RSPB's job largely as one of education. "If we weren't doing this," he says, "no one would have any idea of the size of the problem, and things would be much worse. An egger once told the court, 'It isn't fair. The RSPB has a man behind every bush.' We don't have a man behind every bush! It's only Dave and Stuart for the whole of Scotland. But it works to our advantage that our capabilities are perceived as greater than they are."

It was not excessive manpower but computerpower that put Dave Dick and Stuart Benn behind the bush in the Caithness Flow Country. Yesterday, Dick noticed a suspicious-looking car parked outside a country inn, right across the road from prime greenshank nesting territory. The car and its license number rang a bell, so he promptly phoned his office. The RSPB computer confirmed his hunch: the car belonged to Russell Bennett, who had previously been convicted of illegal possession of eggs in Britain. Almost without doubt, Bennett is one of the men who occupy the ocular field of Dick's 40-power scope today.

With their gear in rucksacks, Dick and Benn now traverse a long ridge, crouching to avoid detection. "We need to see them disturbing the nest to have a case that holds up in court," explains Dick, whose quick eyes and smile reveal his obvious enthusiasm for the spirit of the chase. "It would be better to nail them with the eggs, but experienced eggers are usually clever enough to get rid of their evidence right away." The RSPB has long suspected that egg collectors, like pirates of yore, hide or bury their booty and return for it when the heat is off, after the nesting season.

And then . . . "Send in the cavalry!"

At a favorable vantage point, Dick and Benn set their scopes on the ground and scan the broad expanse of the Flows to the east. In five minutes they have spotted their quarry. "OK," instructs Dick, who has been conducting operations like this for eight years, "I'll watch the one in blue; you take the other." And then, as if to acknowledge the humor of the situation, "Send in the cavalry!"

From here, the men can be seen sweeping long sticks in front of them, pausing occasionally to poke a clump of heather or grass. "If you stopped them they'd say, 'Oh, we're just bird-watchers,' " mocks Dick, a bird-

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Confiscated by the police several years ago, these eggs were taken by a single collector on a one-week holiday in Scotland. Most of them are seabird eggs. Nest robbers usually keep their plunder in ordinary cartons like these until they do cataloguing and processing.

watcher since his boyhood in the Robert Burns country south of Glasgow. "But I know what bird-watchers do and I know what egg collectors do, and they are doing exactly what egg collectors do. They're probably after greenshank or black-throated divers."

About 70 percent of Europe's greenshank (a large sandpiper) and 20 percent of its black-throated divers nest in Scotland's Flow Country. Both species are specially protected by law, and both get hammered by collectors. At a post office not far from here a few years earlier, Dick stopped two men about to ship a large parcel to England. It contained the reproductive output of 7 percent of Britain's 125 breeding pairs of black-throated divers. But the two out on the Flows right now don't seem to be having such a good day, and by midafternoon Dick and Benn have still not witnessed the violation of any law.

Few conservationists would argue with Dave Dick's characterization of egg collectors as "a sordid and pathetic lot." Yet, their aggregate labors over more than a hundred years have left behind a legacy of incalculable worth. Ironically, it was an international ecological disaster that turned the tables and showed that egg collectors could repay at least part of the debt they have incurred in their callous depredations.

In the mid-1950s and early '60s, ornithologists noted with alarm the collapse of raptor populations on both sides of the Atlantic. Even before the crash, Derek Ratcliffe of the Monks Wood Experimental Station near Huntingdon, England, saw that peregrine falcons, sparrow hawks and golden eagles were breaking their own eggs too often to be explained by accident alone. In 1966, a friend put him in touch with the egging underworld, and for several months he worked the old-boy network to gain the trust of collectors who were nervous that he might turn them in, but also eager to find justification for their hobby. Once invited to their homes, Ratcliffe used calipers and a sensitive electric balance to determine the ratio of weight to size in peregrine falcon eggs as an indication of shell thickness. He discovered that in 1946 and '47 there was a sudden drop in the index of eggshell thickness. Ratcliffe and others suspected that the pesticide DDT, widely introduced after World War II, was the culprit. Indeed, it turned out that the veterinary use of DDT on homing pigeons, which began in 1946, provided a direct source of contamination for peregrines when they preyed on pigeons.

At the University of Wisconsin in Madison, ecologists Joe Hickey and Dan Anderson duplicated Ratcliffe's work on a large number of American species and got nearly identical results. They went on to do field research that established a strong link between eggshell thinning and the widespread agricultural use of DDT.

The crucial next step was performed at the U.S. Fish and Wildlife Service's Patuxent Wildlife Research Center in Maryland, where researchers added DDE (a breakdown product of DDT) to the food of raptors and found a dose-response relationship: the more DDE they ate, the thinner the shells of the eggs they laid. In 1972, the Environmental Protection Agency banned most use of DDT in the United States.

If oology can make a contribution to conservation, no one knows it better than Lloyd Kiff (p. 60), director of the Western Foundation of Vertebrate Zoology (WFVZ), which is home to the world's largest collec-

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tion of bird eggs. "We're long past the time as a society when it's permissible for people to have private collections of wildlife," says Kiff, "but I am very grateful to those who got these collections together, because we are standing on their shoulders in the work we do."

In a stucco outbuilding behind the Los Angeles home of businessman Ed Harrison (below), principal patron and president of the WFVZ, Kiff presides over almost 800,000 eggs amassed from the neglected hoards of hundreds of private collectors. The WFVZ is the international focal point of modern oological research, a science that goes much further than the old-time collectors could ever have guessed.

"The egg is a research library all in itself," says Kiff, whose boyish face takes on a slightly puckish look when he's praising his favorite research tool. "From an academic standpoint, we're interested in eggs for many reasons." Every year more than 200 researchers in a dozen different disciplines make use of the WFVZ's collection and its associated data. "We've had zoogeographers verifying the former range of a species; anthropologists identifying eggshells from Indian middens; historians establishing the travel itineraries of collectors; physiologists interested in the relationship of egg size to incubation period or egg size to bird size; ecologists studying brood survival strategies—when is it better to have a few big eggs, for example, instead of a lot of smaller ones?"

Ed Harrison of the Western Foundation of Vertebrate Zoology hefts one of 800,000 eggs in collection there.

More than the eggs themselves, it is usually information on the accompanying data cards that researchers seek—a wealth of dry facts recorded by fastidious oologists a century ago, suddenly come to life. "A documented egg in an egg collection is proof positive that a bird was nesting in a certain place on a certain day," says Kiff. Ornithologists can compare current breeding records with an egg collection's historical data to see if a bird's range is shrinking, and they can use this information in the service of endangered species.

"Before we released any of our birds, we wanted to know their historical territories," says Tom Cade, who has spearheaded the drive to breed peregrine falcons and other birds of prey in captivity for release in the wild. "It is much better to know what nest sites they occupied than to just look around and say, 'This seems like a nice place for peregrines.'" Cade began his breeding program at Cornell University and later moved his Peregrine Fund to Boise, Idaho, where he founded the World Center for Birds of Prey (SMITHSONIAN, April 1990). He used falconers' records and egg collections to choose some release sites. "And then, of course, we wanted to know if the birds in fact occupied those historical sites. In every case, they have."

Building a collection of collections

It was the anticipation of such essential breakthroughs, along with a serious case of the collecting bug, that led Ed Harrison to found the WFVZ. A septuagenarian who climbed more than a few trees and cliffs in pursuit of eggs as a youth, Harrison began collecting collections in 1956. At first he persuaded "egg widows" to donate their deceased husbands' hoards instead of letting them languish. Then he turned to museums with uncurated collections.

"I'll do anything," Harrison admits, "beg, borrow, steal—well, not exactly steal, but blackmail. If I find a collection that's not being used, I'll go there and say, 'Why don't you hire a curator?' If they say, 'Oh, we don't have the money,' I'll tell them to give the eggs to me. Of course they'll say they can't do that, but I'll just

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BETTER THINGS FOR BETTER LIVING.

Lloyd Kiff, director of the WFVZ, compares healthy brown pelican egg with one showing the effects of DDT.

Oological treasures at the Smithsonian Institution include the famed collection of Maj. Charles Bendire.

look them right in the eye and say, 'I'm going to tell everybody that this is a *dead* museum!' And I will. In the Carolinas there's one where the cabinets, all the drawers, are facing the wall! It's a *dead* collection. I want it. I'll bring it to life. I know another one in Texas, over a filling station. It has a condor egg in it."

Whether or not he succeeds, the greatest certainty about the eggs at the WFVZ is the uncertainty of their future uses—and beneficiaries. "The beauty of this collection, like any museum collection," says Lloyd Kiff, "is that you never know what it's going to be used for."

Fred Schaffner came up with a new idea when he was with the National Audubon Society's research department in Tavernier, Florida. He wanted to compare the oxygen in old eggshell fragments from the WFVZ collection with the oxygen in eggshells from birds presently nesting in the Everglades. Although he now works as a wildlife biologist with the U.S. Fish and Wildlife Service in Puerto Rico, the project is one he still intends to pursue because he believes an entire ecosystem could benefit.

"The Everglades has been altered drastically during this century," Schaffner says. "Some would say it is dying. Patterns of seasonal abundance and availability of fishes appear to have changed, and wading-bird numbers have dropped way off. There have been some really horrific nesting failures in recent years."

Schaffner intends to find out if fluctuating freshwater levels can be tracked in the eggshells of herons and egrets, in somewhat the same way as tree rings record rainfall and sunshine from years long past. "Fresh water and seawater have different proportions of the two stable oxygen isotopes," he says, "and the difference shows up in eggshells, depending on where the birds have been feeding. We'd like to determine if there are significant differences in the isotopic signatures of old eggshells and current ones." If differences can be found, it would be compelling evidence that overall water levels and freshwater flow levels through the Everglades were much greater before the canal-digging era at the turn of the century than they are now—data that could add clout to the lobby seeking more water for the Everglades, a highly controversial issue in the water-sensitive politics of Florida.

"To many ornithologists," says Schaffner, "eggshell fragments are just garbage left over from breeding. I

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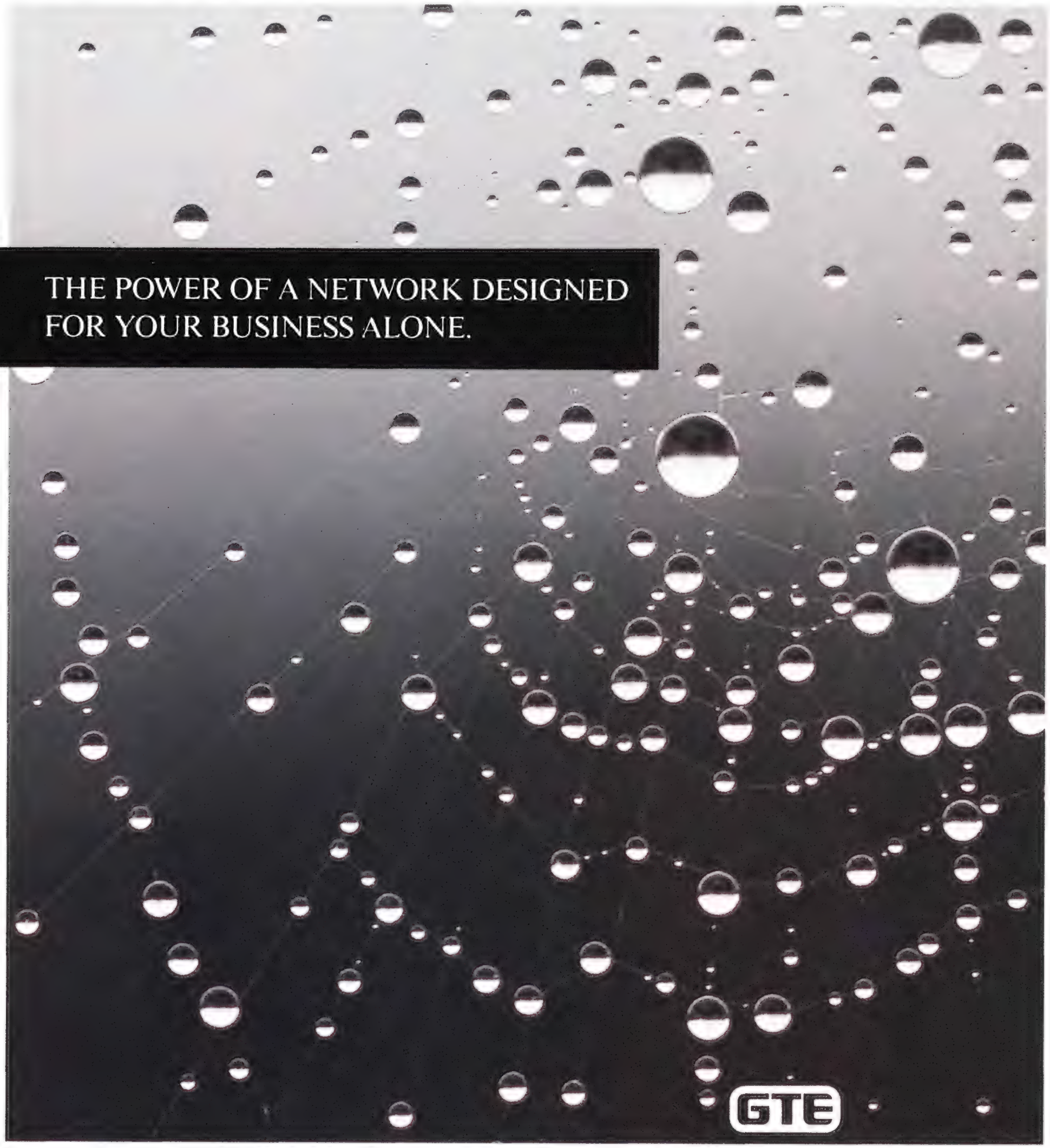

THE POWER IS ON

Turn-of-century collectors Fred (left) and Ed Court proudly display bald eagle eggs they took from aeries near Washington, D.C. The determined brothers reached the nests with the aid of climbing irons, one of which is leaning against Ed's right foot.

want to take that garbage and see how much useful information we can extract from it. The way I look at it, eggshell fragments and eggs in historical collections can be useful forensic tools."

To which Britain's outlaw eggers would likely say, "Hear, hear!" But not even Derek Ratcliffe, the original forensic oologist, accepts the idea that science justifies indiscriminate collecting. "In a sense, our use of the collections justified what these people had done, but it's no excuse for illegal egg collecting to go on. If it's necessary to collect eggs, it must be done in an approved way, and of course the eggs must be put in a suitable repository, not hidden away in people's homes." The RSPB heartily concurs.

On the Caithness Flows, the unapproved form of egg collecting—or, at least, egg seeking—goes on all day. By 4 in the afternoon the men on the moor are walking down a gravelly stream bank and seem to be headed back to their hotel. Chilled and disheartened, Dick and Benn resume their original positions by the road. They have nearly abandoned hope when one of the men under surveillance stops abruptly. Dropping his stick and gloves, he removes what appears to be a piece of white fabric from a pocket. It flaps loosely in the wind while he reaches inside his jacket with his other hand, extracts something small and drops to his knees. Thirty seconds later he stands up and repeats the performance: another white cloth, another mystery object, another half-minute on the ground. Then he's on his feet and, with his partner, trudging back to the road and the shelter of the inn.

Dick turns to Benn, his forehead furrowed with anxiety. "Do we go look at that spot and risk being seen by them," he asks, "or do we call the police first and maybe it turns out to be nothing?" They decide to play it safe. In 20 minutes Constable William Stevens has arrived in his white Land Rover. After a hasty conference, Stevens agrees to wait near the inn in case the alleged egg collectors venture out while Dick and Benn investigate further.

Returning to the gravelly stream bank where the other two men had engaged in that curious bit of business, they are alerted by a jumble of rusted wire. Dick moves it to find an area of exceptionally smooth sand. Resisting the temptation to dig like a badger, he gingerly removes the substrate, handful by handful. It is pay dirt. Six inches down, wrapped in two thick white tissues, are four brown-specked cinnamon-colored eggs. "Greenshank!"

He raises his clenched fists in triumph. "Are *they* going to be hacked off! And on a day like this! I've never found buried treasure before. We *thought* they did this sort of thing, but we've never seen it. This is Christmas at the end of May!"

The constable is summoned. Photographs are taken. The eggs (later identified not as greenshank, but as the common sandpiper, a similar species) are transferred to the RSPB's official evidence-transporting device—a Sainsbury supermarket's Grade A Jumbo egg carton. Then the party walks up to the inn, where Constable Stevens raps on the door of the room occupied by Russell Bennett. "May I have a wee word with you?"

The RSPB has got its man.

Tiny hummingbird egg perches daintily atop egg of the extinct elephant bird, which is about a foot long.

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John Dominis

Fantasy reflects reality: model Rosemary McCarthy (opposite) poses with a fiberglass double. Onlookers show mixed reactions (above) as Donna Anderson and colleagues install new display at Barneys New York.

By Emily and Per Ola d'Aulaire

Mannequins: our fantasy figures of high fashion

For centuries, 'fake people' have quietly gone about their work, showing us how we'd like to look—and they never complain

Window night at Barneys New York. This upscale specialty store, catering to shoppers with a keen sense of fashion—and a generous clothing allowance—is about to have its window dressing changed.

To the beat of the radio blaring funky rock music, the window trimmers inside fuss over their silent charges, dressing them in the newest fashions, attaching earrings, painting inanimate lips and nails, teasing and spraying the mute models' hair.

"The great thing about these things," says Kedrin Marshall, a husky, 27-year-old graduate of the Art Institute of Chicago who sports dreadlocks pulled back into a ponytail, "is that they never complain." He muscles a suede skirt onto slender fiberglass hips and steps back to admire the results. Fellow window trimmer Donna Anderson, a trendy, dark-haired woman in her mid-20s, agrees. "It's like playing with oversize Barbie dolls," she admits, slipping an $800 turtleneck sweater onto one of the mannequins.

After outfitting the mannequins with clothes that have been targeted for the new display, the trimmers carry the 25-pound figures to the windows in the tradi-

Photographs by Chad Slattery

Alluring '30s creation was rescued from a department store basement; she exudes glassy-eyed serenity.

tional, unceremonious mannequin grip—one hand firmly beneath the crotch, one hand tightly around the neck—and begin positioning them. The walls behind are a series of vivid, Picasso-like murals created especially for this display by a guest artist. It's a production worthy of Broadway, every aspect down to the last mannequin eyelash plotted out six months before by vice president-creative director Simon Doonan.

Doonan, a pixyish man with a British accent and deadpan wit, is known as a guru of show-window design. Dressed in an impeccably tailored suit, he takes an active part, striding to the darkened sidewalk outside to contemplate the unfolding mise-en-scène. As he directs the placement of each mannequin, the window trimmers "strike" the figures, carefully stretching wires beneath the clothing to the floor, where the wires are nailed into oak planking. Doonan gives hand signals for further fine-tuning: adjusting a light, straightening a collar, replacing a snagged stocking.

Although store hours have long since ended, a steady stream of night owls passes by. One young man pushing a bicycle presses his lips against the plate glass in a big kiss. A jogger taps on the window with his knuckles and waves. A white poodle puts its paws against the glass and barks furiously. A tipsy passer-by pauses. "I've walked by these windows every night for 20 years," he shouts. "Doesn't that count for anything?" A uniformed guard at the store entrance gently hustles him on.

Finally, at 2 in the morning, Doonan gives the ultimate thumbs-up. The show is over. Toolboxes are packed, and everyone goes home. Everyone, that is, except the mannequins.

From King Tut's tomb, a fashion first?

Mannequins have fascinated mankind for centuries. Indeed, these glorified coat hangers have a genealogy that goes back to ancient times. When Howard Carter opened King Tutankhamen's tomb in 1922, he discovered a wooden torso not far from a clothing chest. Dating from 1350 B.C., it may have been the world's first dress form.

"The idea of having idealized three-dimensional forms of the human body from different time periods is what fascinates me," says Claudia Kidwell, head of the costume division at Smithsonian's National Museum of American History, which houses a mannequin collection. Kidwell explains that mannequins reveal a lot about the culture that created them. "The way different generations learn to align the skeleton and distribute weight has to do with the culture a person grows up in and the posture of their time," she says.

The figures in the collection, dating from 1840 to the present, embody some of these generational differences. The 1840 item is actually an artist's lay figure used by

Wax figures, made in 1925 by French manufacturer Pierre Imans, sport human hair and haughty attitudes.

The pair at left appeared in a "Streets of Paris" exhibit. Stylishly aloof flapper once adorned store windows.

Pierre Imans' diver, from the 1930s, is made with lightweight papier-mâché. Figures at right, from '40s display window at Younkers department store, Des Moines, are combination of papier-mâché and plaster.

American painter Thomas Sully. Its shape reveals how the style of corsets worn by mid-19th-century women rearranged their body flesh, forming a very round, protruding tummy below a modified waist.

Display figures of the late 19th century show the head aligned on top of the spine, and the shoulders back and down. By 1915, however, there appears to be a softer, straighter alignment of the shoulders. Modern mannequins, on the other hand, illustrate that a more forward alignment of the head and shoulders is the accepted posture today.

Michael Southgate, creative director of Adel Rootstein Display Mannequins of London and New York, has an explanation for our fascination with mannequins. "People love fantasy versions of the human figure," he says. "We're brainwashed this way from early childhood with dolls and toy soldiers."

Though "fake people" have come in various guises

Market week attendees (left) eye Adel Rootstein's "Glamour Nineties" line at the New York showroom. Collection contains mannequins in straight and leaning postures. Legs come in two poses: high-heels or flats.

over the years—children's toys, artists' lay figures, wax effigies, tailors' dummies—the European fashion doll is actually the progenitor of the modern mannequin. These dolls, ranging from a little over a foot tall to life-size, with torsos of cloth, leather or wood, and heads of wood, fabric, wax or porcelain, were stylishly clothed and sent abroad to spread news of the latest modes. So popular were the little ambassadors of fashion and goodwill that they received safe passage across borders even during times of war.

In 1396, Charles VI of France was involved in peace negotiations with King Richard II of England. Charles' wife sent a life-size doll dressed in the latest fashions of the French court as a gift to the English queen. Henry IV of France dispatched miniature, elegantly attired dolls to his fiancée, Marie de' Medici of Florence, to update her on French trends. And Marie Antoinette kept her mother and sisters in Austria apprised of the latest vogues at Versailles with the elaborately clothed figures she regularly sent them.

Although the French have sometimes been credited with creating the first full-figured mannequin, no one seems to know for certain exactly where or when it made its first appearance. Most experts agree that the succession of stages set in motion during the Industrial Revolution—the manufacture of large, steel-framed, plate-glass windows, the invention of the sewing machine, the electrification of cities—cleared the way for its arrival. The men and women who strolled the boulevards were the audience; all that was needed were players. Enter, stage left: the mannequin.

Such was the allure of the figures that window shopping quickly became a form of entertainment and leisure activity; people came to gaze at a make-believe world frozen in place. The female mannequins that gazed out at them in those early days were big-busted heroines in three basic poses: left foot forward, right foot forward or both feet together. They cost $15 apiece, a tidy sum at the time, but the resulting increase in business was worth it.

And as retailers prospered, so did the display industry. L. Frank Baum, who went on to create the immortal Oz books, was fascinated with the field. He worked in 1897 as editor of one of the first trade publications on show windows; three years later, he wrote a book on the subject. In it he discussed the importance of mannequins in attracting customers to the store's goods. "Without such displays," he wrote, "the merchant sinks into oblivion. The busy world forgets him and he is left to himself, to rust, vegetate or to fail ignominiously."

The most realistic mannequins of Baum's era were those of wax, and like today's mannequins, they mirrored the times. Though their false teeth, glass eyes and human hair, implanted with warm needles a strand at a time, had retained a definite taxidermic air about them, they sported the full bosom and broad beam of the Gay Nineties woman. Waists were wasp thin—not surprising at a time when ladies of society often were willing to suffer for their beauty to the point of having their lowest rib surgically removed to achieve an appropriately modified midriff.

Early display dummies had several problems, however, and weight was one of them. With feet of iron to keep them upright; legs and arms of wood, heavy fabric or wax; hips and abdomens of papier-mâché, sawdust, plaster or wood; and chests and heads of solid wax, they were clumsy and sometimes weighed in excess of 300 pounds. They broke easily and were hard to keep clean—and worst of all, they melted.

Though electrification of store windows had been a boon to the mannequin business, as wattage increased, so did melting. One pre-Prohibition window featured mannequins arranged as if at a small dinner party. The "hostess" held a glass of wine in her hands, frozen in a toast. The window dresser was so pleased that he went home early that night. When he noticed a crowd gathered around his display the next morning, he was sure it was in admiration of his work. Proudly pushing his way through the assemblage, he was shocked to see that his hostess had softened shamefully under the heat of the lamps. She was slumped over the table, her mouth sagging, the spilled wineglass still clutched in her now limp hand. The congenial atmosphere of the night before had become the "morning after," a wine-stained scene not likely to sell the store's apparel.

World War I brought considerable social change to the country, and mannequins were quick to reflect it. Women, now working by necessity, shed their hats and unlaced their corsets. Clothing revealed the unheard of: ankles—even legs. Bustlines turned modishly flat, and a sinuousness began to creep in. The stiff, formal mannequin poses of the turn of the century gave way to a sprightlier attitude.

Then the Twenties roared in, and in spite of Prohibition, or more likely because of it, so did a studied air of debauchery. Says Robert H. Hoskins, assistant professor at Manhattan's Fashion Institute of Technology (FIT), "Mannequins tended to look a little tired-eyed during Prohibition, as if to say, '*I* know where the speakeasies are.'"

Some of the mannequins at this time were abstract, graced with a Modigliani look that reflected the Art Deco style of the era—a new look that was made easier by the introduction of stylized papier-mâché manne-

Dreamy Frauke, exuding sexiness and moodiness, will likely wear lingerie, says manufacturer Ralph Pucci.

Gemini Mannequins' 1990 Allegro figures personify a self-assured generation at ease with individuality.

At Greneker factory in Los Angeles, face mask and vented spray booth protect workers from paint fumes.

Mannequins by Pucci International forgo arms, legs, wigs, while Val Dray prepares them for Macy's display.

quins. The material allowed the fashion figures to shed about 100 pounds—and made them more heat-resistant to boot. On the downside, however, papier-mâché shrank, and should a storeroom flood, any mannequins below the high-water mark would dissolve into a mass of soggy mush.

Eventually, the department store dummy attained the title "mannequin," from the Dutch *manneken*, meaning "little man"—though from the start male mannequins have been thorns in the side of the business. "Males have always been difficult," says Michael Southgate. "People were conditioned to seeing glamorous, made-up women, while for men those things were taboo." "Getting people to identify with mannequins has always been paramount," says FIT's Hoskins. "They must convey idealized images of ourselves, what we aspire to be rather than what we actually are."

The 1930s brought forth an ideal creature called Cynthia, designed in New York by Lester Gaba, soap sculptor turned mannequin artist, who took his inspiration from the wealthy socialites of the day. Cynthia so enchanted her creator that she became his constant companion. Soon the odd couple was seen at the Stork Club, riding a double-decker city bus, in a box at the opera. In her perpetual seated pose, elbow on knee, cigarette in hand, Cynthia became an overnight hit. Couturiers sent her clothes. Cartier and Tiffany lent her jewelry. Papier-mâché mannequins had by then yielded to plaster figures which, though more or less waterproof, were awkward and dangerously brittle. Unfortunately, beloved Cynthia met her demise when she slipped from a chair in a beauty salon and shattered into a thousand pieces.

With the onset of World War II, the country changed again; typically, mannequins changed with it. Troops were fighting and dying abroad, and the store-window ladies became subdued. Somber clothing replaced bright colors. Expressions were serious, eyes looked forlorn. While modeling the restrained fashions, wartime mannequins did patriotic double duty, clutching

Emily and Per Ola d'Aulaire live in Connecticut with their son, dog, cat and mannequin. They have written for SMITHSONIAN *on airline maintenance.*

The faces on this group are of famous live models who are featured in several other Pucci collections.

Mannequin sculptor Tanya Ragir molds clay likeness of Danielle Gadiot. Hands, head, are done separately.

placards that promoted war bonds and the Red Cross.

After the war, the mannequins wore looks of promise and prosperity again. They were radiant—and noticeably voluptuous. "It's almost as if they were saying, Our men are back. Let's catch them while we can," says Marsha Bentley Hale, who has studied mannequins for 12 years. Simultaneously, male mannequins had a comfortable "father knows best" air about them. They wore tweed jackets and relaxed, genial grins on rough-textured faces. Some even had holes drilled between their lips for inserting pipes.

Hale, known to some as "Marsha Mannequin," began her fascination with the figures while studying photojournalism at the University of California, Los Angeles. While she was driving through Beverly Hills one night in 1978, a group of mannequins in a store window caught her eye. The budding photographer grabbed her camera from the backseat—and has been documenting and collecting mannequins ever since. The trouble, asserts Hale, is that the early manufacturers didn't save old catalogs or photographs (see page 32), and the mannequins themselves were often discarded once they were damaged or out of fashion.

Hale's hope is to erect the world's first museum devoted exclusively to mannequins, but she has yet to find a permanent home for her collection. To date, she has amassed an archive of some 5,000 photographs and 2,000 articles on the fashion fixtures, and has accumulated 150 mannequins she considers to be "important" representations of different eras. She has started cataloguing the archival material that now occupies several rows of file cabinets in her home. Her collection of figures, disassembled and carefully wrapped in acid-free tissue paper, is currently stored on a 600-acre avocado farm south of Los Angeles.

One of the most bizarre stories in Hale's archives concerns a time when Salvador Dali was commissioned to create a display window at Bonwit Teller, a fashionable New York department store—an exercise that Dali noted "did more for my glory than if I'd eaten up all Fifth Avenue." The focus of Dali's window was a claw-foot bathtub, its interior lined with Persian lambskin and filled with narcissi floating in muddy water. Dozens of disembodied white mannequin arms reached

Sultry Ava is member of Vogue International's "Little Women" series, made in 1990 to display accessories.

from the bath. Each held a hand mirror tilted to reflect a turn-of-the-century wax mannequin with a chaste China-doll face, about to step into the tub. Chicken feathers were glued to her otherwise nude body. Blood-red tears stained her face; her waistlength blonde hair crawled with large, artificial bugs. Dali completed his task and returned to his hotel to rest.

The store opened at 9 A.M. to high hopes, but shoppers immediately raised such a hue and cry at the shocking display that by 1 P.M. workers were assigned to make adjustments to the window. When Dali saw the changes, he barged into the display to make repairs. Somehow, he managed to push the tub through the plate-glass window and onto Fifth Avenue. Two policemen who happened to be passing by promptly arrested the imperious Dali for malicious mischief. Bonwit's reimbursed Dali for the $800 fine he was assessed.

More recently, Carole Petersen, a window dresser then with The Broadway, a California department store, rubbed shoulders with reality while working on the corner of Hollywood and Vine. As she put the final touches on one of the mannequins she glanced out the window to see, to her horror, an assailant pull out a knife and stab another passer-by. She'd been working so carefully, slowly and smoothly that the assailant had apparently thought she was a mannequin too. When she bolted from the window, the man with the knife, startled at the sight of a mannequin coming to life, fled himself, and the victim was promptly rescued.

Sometimes mannequins have startled people without any assistance from a display window. Hindsgaul Mannequins, a Danish firm that had been experimenting with new materials, came out with a mannequin made of polyurethane. To demonstrate how lightweight it was, the designers tossed a prototype female, nude, into a nearby river and watched it float away. It is testimony to the sculptor's skill that police received a frantic call that a murder had just occurred. Investigators cleared up the matter quickly, and Hindsgaul went back to more-orthodox product-testing methods.

Although plastic is popular with some manufacturers, most U.S. manufacturers prefer fiberglass, a lightweight material used in yacht hulls, because it can be sanded as smooth as a block of hardwood. At Rootstein's 70,000-square-foot Brooklyn facility, workers turn out thousands of fiberglass figures a year. Each sander has a small vacuum cleaner on the table beside him, and a dust extractor is built into each bench. In addition, large exhaust fans, their filters changed three times a week, work round the clock to minimize the danger to workers. "The fans are so powerful," says factory manager Joe Garcia, "that some days I swear we pull the smog from Denver all the way through here."

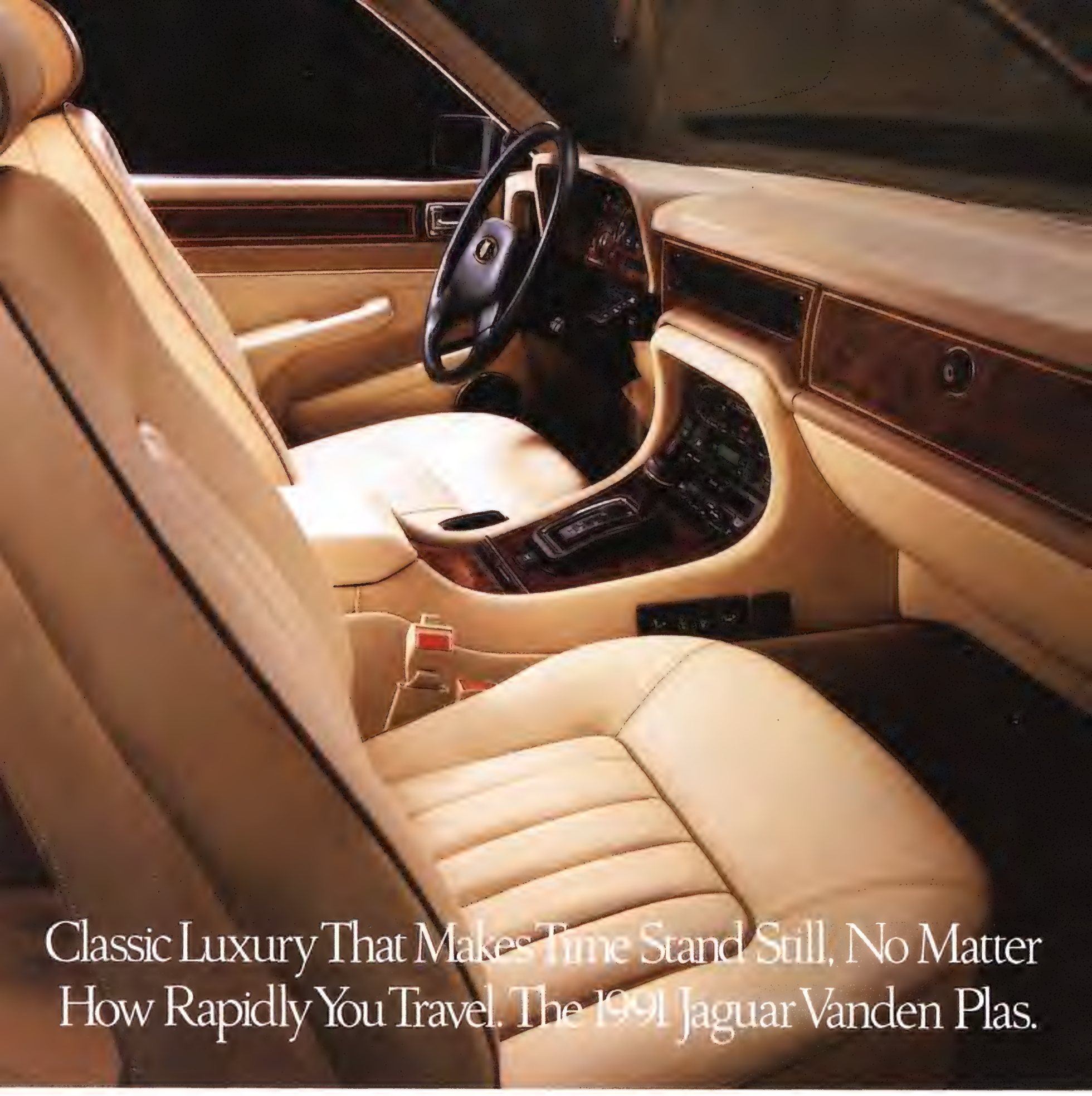
Adel Rootstein, a leading manufacturer, burst on the scene in 1967 with the now-famous Twiggy mannequin. It was a serendipitous match. Rootstein became well known thanks to the success of the Twiggy figure, and the mannequin, with its large eyes, long lashes and thin body, helped make the real Twiggy one of the most famous models in history.

Rootstein breathed life into the industry by creating mannequins with relaxed, natural-looking poses at a time when fashions dictated less-static ways of showing off clothes. But Twiggy was not Rootstein's first innovation. In 1965 she produced the first figure with truly ethnic features, a black model named Luna. Says Hale, "Rootstein endowed her figures with personality, made them laugh and gave them character." She also helped set the trends for the ensuing decades: the liberated, braless look of the '70s; the don't-mess-with-me, fist-clenching feminism of the '80s; and the somewhat softened yet involved look of the '90s.

Parading fitness, romance, sophistication

Although today's mannequins are neither as harshly angular as those of the feminist era nor as bony as Twiggy, mannequins still represent the ideal. About 65 percent of women in this country wear size 14 and above, but mannequins are said to represent the "optimal" size eight and are actually often closer to a size six.

James Damian, president of Hindsgaul, sees the present decade as one of romance. "It's OK to fall in love again," he says. "We want our mannequins to show that." Rootstein's Michael Southgate thinks today's concern with health and fitness will also continue to be important, as well as more freedom of choice. "There used to be a fashion look," says Southgate. "Today, every kind of look—Western, fantasy, sophistication—is on sale at the same time. People are more independent-



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A B L E N D I N G O F A R T A N D M A C H I N E

Lowell Nesbitt's "Going for the Gold" mannequin has also sold as one-piece, limited-edition sculpture.

minded these days; the industry can no longer dictate."

Ralph Pucci, owner of New York's Pucci Mannequins, has used the current interest in health and fitness to address the problematic image of the male mannequin. Recently, he commissioned artist Lowell Nesbitt (above) to design a collection of store figures. Nesbitt based them on Greek and Roman heroic sculpture, to reflect the athletic male of the '90s. The fiberglass mannequins are larger than life, with musculature closer to that of Arnold Schwarzenegger than to male mannequins of the past.

The mannequins that transmit these diverse signals start their lives in an artist's studio as clay sculpture. Some artists prefer to work from life; others prefer abstract representations and rely on invention. John Bates, president of the English firm Gemini Mannequins, and designer of and brains behind the company's stylized figures, prefers freedom of imagination. "An idea drops out of the sky," he says. "You see a picture in a magazine, a movie, a woman in a café; something happens inside your head—you think, That's it."

But many mannequin designers argue the importance of modeling from real life. "Usually, when you invent the human form," asserts Tanya Ragir, a Los Angeles artist who sculpts mannequins for Patina V, "they look just that: made-up. With a live model the anatomy is authentic. There's a sense of movement, a feeling that someone is really there."

Ragir has, by her reckoning, at least "150 bodies" to her credit. "I'm always watching how people move, on the lookout for the right attitude for the kind of mannequins we're working on. I've gone up to people on the street or in my sports club and said, 'You have a great body. Will you pose as a mannequin for me?' It helps that I have a business card," she adds with a grin.

A body beautiful for mass production

Ragir found Danielle Gadiot in a dance class; Danielle has more muscle tone than the models Ragir worked with when she began 12 years ago. "My models have added inches over the years," she says, massaging and molding the clay on the emerging form. Indeed, the body that was taking shape—Danielle's body—was both athletic and vibrant, yet feminine and supple. It was to be the depiction of a body beautiful, and a body in shape. Ragir will spend more than 20 hours with Danielle before the work is complete.

Though the concept of mannequins as art is debatable, the craftsmanship behind modern mannequins is not. The creation of a mannequin is much like the creation of any fine sculpture. When Tanya Ragir has finished sculpting Danielle, mold makers will pull a plaster "waste mold" from the original clay. From that, they cast a fiberglass prototype, which is then cut at the arms and hips, and sometimes at one leg, so it can be taken apart for ease of dressing. From the master figure, fiberglass "production molds" that split along the sides, like clamshells, are made of the individual parts. Almost every detail from Ragir's original clay sculpture will be transferred to the final fiberglass figures.

All told, there are about 200 mannequin manufacturers, worldwide. The leaders come out with a new line of mannequins—from 6 to 12 new poses—twice a year. They cost on average about $800 each and have a fashion life of about seven years.

Obsolete store mannequins are demoted, moved from departments that do a lot of business to less important areas in the store or to branches that do lower volumes of business. Their replacements make their debuts at "market week," sponsored by the National Association for Display Industries (NADI) each December and June in Manhattan. At that time, thousands of buyers representing retail stores on every continent descend on the city to mull over the latest in

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mannequin mania. Most of the major manufacturers, whether American, Japanese or European, have showrooms located on the West Side of Manhattan. Chartered buses shuttle the mannequin mavens from the major show site to NADI member showrooms.

The fashionable studios and airy lofts look like crosses between a new-car dealership and an art gallery. Says FIT's Hoskins, "Millions of dollars are spent during market week—the food, the drinks, the schmooze. This is when the sales are made that will determine business for the next six months to a year."

What the buyers are looking for are mannequins with the right "attitude." It's a word frequently used in the business, and it sums up a mannequin's look: its pose, its mood, the message it sends to the public about the clothes it's wearing and about the store it's in.

In a recent market week, there were more ethnic mannequins than in the past—blacks, Asians, Hispanics. And, like the population around them, some models were more mature. Rootstein Mannequins offers "Col. and Mrs. Lewis," a couple in their 60s who represent what Southgate refers to as woopies: well-off older people. Regardless, older mannequins, even glamorous ones, are still the exception. Says Ralph Pucci, "Glamour and youth are still what sells."

Whatever cultural ideals or fashion attitudes mannequins embody in the future, almost everyone agrees that these surrogate humans will continue to intrigue. "You can't help but relate to mannequins as human," says FIT's Hoskins. "We have to constantly remind ourselves that they are merely imitations of human form expressed in fiberglass or plastic." As one of the buyers at last year's market week commented, "Mannequins used to look like mannequins. Now they look like—well, people."

As the exhausted crew packed up to go home at 2 A.M. that window night at Barneys, Kedrin Marshall glimpsed for a last moment the mannequins' unearthly presence against the dark avenue beyond the glass. To him, they seemed very much alive, in an eerie manner. One can't help but wonder: What *do* mannequins do when they're left alone at night?

Marsha Hale, from California, carries Depression-era figure that has lost its arms. The transitory fashion representatives are often discarded once their look becomes obsolete, says Hale, who has collected 150.

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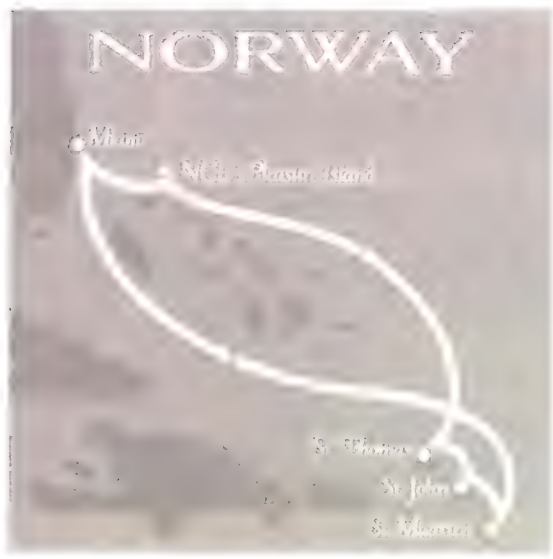

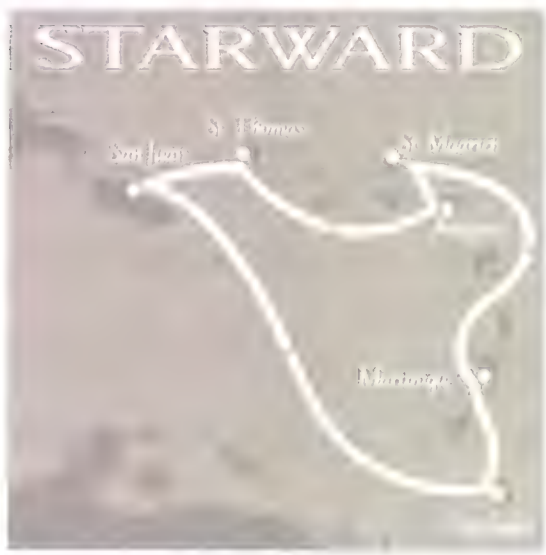

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By Simon Winchester

After dire straits, an agonizing haul across the Pacific

It was only a generation after Columbus that Magellan's tiny fleet sailed west, via his strait, then on around the world

Balboa found the ocean. Then, in their droves, explorers emerged to circle and probe and colonize it, but first, in that most daring of all endeavors, to cross it.

No one could be sure how wide it was. No one could be sure where lay the Terra Australis Incognita, which Ptolemy had postulated and which Mercator would argue was a necessary balance for a spherical world—without it the whole planet might simply topple over, to be lost among the stars. No one knew the weather or the currents or the winds. But one small certainty spurred the would-be circumnavigators onward. It was that the Spice Islands, the Moluccas, lay at the farthest side of whatever might lie beyond the waters, pacific or unpacific, that Balboa had discovered.

Traders buying nutmegs and cloves from Arabian merchants had known about the Spice Islands for centuries; in the 1200s Marco Polo knew roughly where they were, for he saw junk traffic in the ports of North China loaded with spices and manned by crews who had come from the south. In 1511 a Portuguese expedition led by Antonio d'Abreu actually discovered them by moving eastward, after passing the tip of

Portrayed in fanciful allegory done 75 years after the voyage (opposite), Magellan's ship passes Tierra del Fuego, guided through the strait by the gods of sea and sky. The giant (who is swallowing an arrow) was the first "Patagonian" known to history. The real Magellan (at right), an amazingly tough mariner, was relentlessly driven by his curiosity, raw ambition and Christian zeal.

Africa, to Malacca, thence down the strait and past the immense island of Borneo to the confused archipelago where nearly all known spices grew in wild profusion. To reach their goal, d'Abreu's men had gone halfway round the world from Europe to the Orient.

The geographical fact they established was of great political and imperial importance. Since 1494, when the Treaty of Tordesillas was signed, all of the unknown world to the east of an imaginary line that had been drawn 370 leagues west of the Cape Verde Islands would belong to Portugal. Everything to the west of that line would belong to Spain. So far as the Atlantic and the Indian oceans were concerned, there was no problem; but what about the other side of the world? Conquest, squatter's rights, annexation, force majeure—these cruder tools of geopolitics might well dictate its eventual position. Thus the Moluccas, if discovered by going eastward around the globe, would belong to Portugal—at least by the logic of some explorers. But the Moluccas claimed by a party going westward might belong to Spain. So while d'Abreu and his colleagues went off eastward, even braver or more foolhardy men, carrying the banner of Castile, were determined to discover—heroically and, as it turned out for many of them, fatally—the way to reach this same Orient by traveling westward across the vast unknown.

There is thus a nice irony in the fact that the man who undertook the seminal voyage, and did so in the name of Spain, was in fact Portuguese. He was born Fernao de Magalhaes, and the Portuguese—"He is ours," they insist—rarely care to acknowledge that he renounced his citizenship after a row, pledged his allegiance to King Charles I (later to become Emperor Charles V) and was given a new name: Hernando de Magallanes. The English-speaking world, which reveres him quite as much as does Iberia, knows him as Ferdinand Magellan.

He set off on September 20, 1519, with a royal mandate to search for a passage to El Mar del Sur, and thus to determine for certain that the Spice Islands were within the Spanish domains. He had not the foggiest notion of how far he might have to travel. For all Magellan's 237 men in their five little ships knew, Balboa's Panama and the northern coast of South

By 1494 treaty, new lands east of mid-Atlantic line would belong to Portugal; everything west was Spain's.

America, which Columbus had sighted in 1498 on his third voyage, might be the equatorial portions of a continent extending without a break to the Antarctic pole, making the southern sea they sought quite unreachable from the west. Johann Schöner's globe of the world, then the best known, placed Japan a few hundred miles off Mexico. The historian López de Gómara asserts that Magellan always insisted that the Moluccas were "no great distance from Panama and the Gulf of San Miguel, which Vasco Núñez de Balboa discovered." Magellan would rapidly discover precisely what "no great distance" was to mean.

The five vessels that would soon make history—the *Victoria*, the *Trinidada* (the *Trinidad*), the *San Antonio*, the *Concepción* and the *Santiago*—were small, the largest being 120 tons, and hopelessly unseaworthy. ("I would not care to sail to the Canaries in such crates," wrote the Portuguese consul in Seville, with obvious pleasure. "Their ribs are soft as butter.")

They set sail from the Guadalquivir River under the proud corporate title of the Armada de Molucca, amply armed but hopelessly provisioned, with crews composed of men of nine different nationalities including a lone Englishman. There was one Moluccan slave, Enrique, who would act as an interpreter if the crossing was accomplished. There was a journalist, too, Antonio Francesca Pigafetta, who may also have been a Venetian spy. In any case, Pigafetta's diaries remained the source for all future accounts of the voyage; he had joined the ships, he said, because he was "desirous of sailing with the expedition so that I might see the wonders of the world."

The sorry tales of sodomy and mutiny, of yardarm justice and abrupt changes of command, and of all the other trials that attended the armada on its path south and west across the Atlantic do not belong here. The truly important phase of the journey starts on February 3, 1520, when the vessels left their anchorage near today's Montevideo and headed south. No charts or sailing directions existed then. The sailors were passing unknown coasts, and confronting increasingly terrifying seas and temperatures that dropped steadily, day by day.

They began to see penguins—"ducks without wings," they called them, *patos sin alas*—and "sea-wolves," or seals. Seeking a way to the Pacific, they explored every indentation in the coast off which they sailed, and with depressing regularity each indentation—even though some were extremely capacious and tempted the navigators to believe that they might be the longed-for straits—proved to be a cul-de-sac. They spent much of the winter, from Palm Sunday until late August, in the center of a chilly and miserable bay at what is now Puerto San Julian (see map on page 88). The winter was made doubly wretched by an appalling mutiny and the consequent executions and maroonings that Captain-General Magellan ordered; by the wrecking of the *Santiago*, which he had sent on a depth-sounding expedition; and by the realization of the dreadful damage done to the remaining ships by the chomping of those plank-gourmets of the seas, teredo worms.

Simon Winchester is the author of eight books that combine history and travel, including The Pacific *(Hutchinson), from which this article was adapted.*

Balboa "discovered" Pacific by struggling across the Isthmus of Panama to claim it for Spain in 1513.

But one important discovery was made at Puerto San Julian: these southern plains were inhabited by enormous nomadic shepherds who herded not sheep, but little wild llamas known as guanacos, and who dressed in their skins. Magellan captured a number of these immense people—one pair by the cruel trick of showing them leg-irons and insisting that the proper way to carry the shackles was to allow them to be locked around their ankles. Magellan's men also liked the giants' tricks: one, who stayed aboard only a week but allowed himself to be called Juan and learned some biblical phrases, caught and ate all the rats and mice on board, to the pleasure of the cook and the entertainment of the men. Magellan called these men "*patagones*"—"big feet"; the land in which he found them has been known ever since as Patagonia.

By late August the fleet set sail again. Two men had been left behind, marooned for mutiny by Magellan's orders. They had a supply of wine and hardtack, guns and shot, but when other, later expeditions entered the bay, no trace of them was found. They may have been killed by the giants; they may have starved to death. All that the men of the armada remembered were their pitiful wails echoing over the still waters as the ships sailed out of the bay into the open sea, and then south.

By the time the flotilla had reached 50 degrees south latitude (not far from the Falkland Islands), the men were restive. Their artless plea now was: If the expedition wanted to reach the Spice Islands, why not turn east toward them and pass below the Cape of Good Hope, as others had? Magellan, sensible enough to know this would make a nonsense of the whole plan to render the Spice Islands Spanish, refused. But he promised that if no strait was found by the time they had eaten up another 25 degrees of latitude, he would turn east as they wished. The murmurs stilled. The Captain-General clearly had no idea of the utter impossibility of navigating at 75 degrees south latitude, for on that longitudinal track his ships would get stuck fast in the thick ice of what is now the Weddell Sea, hemmed in by the yet unimagined continent and the unendurable cold of the Antarctic.

The Captain-General sights a virgin cape

On October 21, 1520, Magellan sighted a headland to starboard. Cabo Virjenes, which today is equipped with a lighthouse that flashes a powerful beam and a radio direction beacon, is an important navigation point on the South American coast. It marks, as Magellan was soon to discover, the eastern end of the strait that bears his name—the tortuous entrance, at long last, to the Pacific.

Ranges of immense, snow-covered mountains crowded into view; there could be, Magellan must have thought, no possible exit. Still, he ordered the *San Antonio* and the *Concepción* into the headwaters of the bay—only to be horrified when he saw them being swept into a huge maelstrom of surf and spindrift by unsuspected currents and winds. But he had no time to dwell on such miseries, for an immense storm broke over his own ship, the *Trinidad*, as well as the *Victoria*, alongside. Men were hurled overboard. One vessel was dismasted; the other nearly turned turtle several times. The storm went on and on and on. When relief finally came to the exhausted crews, the only recourse, it seemed, was to turn tail and head for home. The expedition was over, an abject failure.

Yet just at that moment (one occasionally suspects that the mythmakers have been at work on the story) the lookout sighted sails on the western horizon. They were indeed what they could only have been: the two scouting vessels had returned. Not shattered and aground, they were safe and sound. The joy Magellan must have felt at realizing his men were still alive was, however, as nothing when, as the *San Antonio* and the *Concepción* drew closer, he saw their yardarms hung with bunting, music being played, and the crews dancing and singing.

As an account of the long voyage puts it, "Suddenly, they saw a narrow passage, like the mouth of a river, ahead of them in the surf, and they managed to steer

Magellan's fleet originally included 237 men, 5 ships: *San Antonio, Trinidad, Victoria, Concepción* and *Santiago.* One deserted early, only three traversed the strait; just *Victoria*—with a surviving crew of 18—made full journey round the world, reaching home September 6, 1522.

Map shows Magellan's amazing progress through the strait and across 6,000 miles of uncharted Pacific to the Philippines. Insert traces the whole circumnavigation (1519-1522), sailed westward from Spain to Spain.

into it. Driven on by wind and tide they raced through this passage and into a wide lake. Still driven by the storm they were carried west for some hours into another narrow passage, though now the current had reversed, so what appeared to be a great ebb tide came rushing towards them. They debouched from this second strait into a broad body of water which stretched as far as the eye could see toward the setting sun. . . ."

By tasting the water and finding it salty, and then making sure that both the ebb tides and flood tides were of equal strength (tests that argued against this body of water being a river), the captains of the scout ships realized they had, indeed, discovered the way through. Magellan, believing that his ultimate goal was within his grasp, brushed aside the persistent doubter's view that he should, despite the discovery, turn back *eastward* for the Moluccas. "Though we have nothing to eat but the leather wrapping from our masts," he declared, "we shall go on!"

The Strait of Magellan is as darkly beautiful as it is useful. Before I first visited the strait I supposed, wrongly, that since its latitude to the south is more or less the same distance from the Equator as Maine's latitude is to the north, the coastline would also be vaguely similar. But it is much starker, more hostile, more grand. Heading west, as Magellan did, the land begins flat, and wind reduces such trees as there are to stunted survivors. Even today the strait is not an easy place for sailing vessels: ". . . both difficult and dangerous, because of incomplete surveys, the lack of aids to navigation, the great distance between anchorages, the strong current, and the narrow limits for the maneuvering of vessels," says the pilot manual.

"A cargo of falsehood against Magellan"

For Magellan and his men it was a nightmare. The currents were treacherous. Unexpected winds, now known as williwaws, flashed down steep cliffs, threatening to drive the little fleet onto the rocks. He lost another ship; though he did not know it at the time, the *San Antonio* had turned tail and was heading back to Spain, "bearing a cargo of falsehood against Magellan." She also took away supplies vital for all of the fleet—one-third of the armada's biscuits, one-third of its meat and two-thirds of its currants, chickpeas and figs. The men began begging to turn back.

Days passed. Finally, on November 28, 1520, *Trinidad*, *Victoria* and *Concepción* passed beyond the horrors of the strait, and sailed westward into an evening that became, suddenly, magically serene. We are told that "the iron-willed Admiral" broke down and cried. Then he assembled his men on deck. Pedro de Valderrama, the *Trinidad*'s priest, stood on the poop deck and called down on the crew of all three remaining vessels the blessing of Our Lady of Victory. The men sang hymns. The gunners fired broadsides. And Magellan proudly unfurled the flag of Castile.

"We are about to stand into an ocean where no ship has ever sailed before," Magellan is said to have cried (though it has to be emphasized that there is no hard evidence that he did so). "May the ocean be always as calm and benevolent as it is today. In this hope I name it the Mar Pacifico." And just in case it was not Magellan who first uttered the name, then perhaps it was Pigafetta: "We debouched from that strait," he later wrote, "engulfing ourselves in the Pacific Sea."

The European dawn breaks on the Pacific

The concept of the Pacific Ocean, the greatest physical unit on Earth, had been born. Balboa had seen it. D'Abreu had ventured onto its western edges. Magellan had reached its eastern periphery. Now it was up to the explorers to try to comprehend the enormity of their discovery. But before they could do that, Magellan had to sail across it. This was his determined aim, and the aim of those who sponsored his venture.

So the Captain-General ordered the sails set to carry the shrunken, but now at long last triumphant, armada northward. He thought it might take three or four days to reach the Spice Islands. It was a savage underestimate—a tragically optimistic forecast, based quite probably on the terrible inability of long-distance navigators to calculate longitude (an inability that insured that not a single estimate then available to Magellan was even 80 percent of the true size of the ocean).

Not that anyone suspected tragedy as they breezed to the north of Cape Desado. Far from it. Once the armada had reached the lower southern latitudes, the winds began to blow balmily and unceasingly from the southeast. They were trade winds, just like those well known in the southern Atlantic and Indian oceans, and they were pleasantly warm. Their effect produced nothing but splendid sailing: no undue swells, no angry squalls, no cyclonic outbursts. Just endless days and nights of leisured running before a steady, powerful breeze. "Well was it named Pacific," wrote Pigafetta later, confirming his master's choice of name, "for during this period we met with no storms."

And for weeks and weeks, simply by wafting before the winds with sails unchanged, the fleet managed to miss every single one of the islands with which the Pacific Ocean is littered. Magellan's course, sedulously recorded by his pilot, Francisco Albo, shows him—almost uncannily—leading his vessels past the Juan Fernández Islands, past Sala y Gómez and Easter islands, past Pitcairn, Ducie, Oeno and Henderson and, indeed, past everything else. His astrolabe, his crude speed recorder, his hourglass (a watchkeeper would be

flogged for holding it against his chest, since to warm it made the sand flow faster, the hour pass more quickly, the watch be more rapidly over) served Magellan admirably: he plotted the likely course to the Spice Islands, and his ships took him there, more or less.

Any deviation could have caused disaster. Had he strayed just 3 degrees north of Albo's recorded track, he would have hit the Marquesas; 3 degrees south, he would have come to Tahiti. He was a hundred miles off Bikini Atoll. He passed within half a day's sailing of razor-sharp coral reefs—thundering surfs, huge spikes and lances that would have ruined his ships forever. At this distance in time, it seems as if some guardian angel had Magellan's tiny fleet under benevolent invigilation for days and nights too numerous to count. Yet this providence had a less kindly face. Six weeks out of the strait, Magellan's men began to die. In the monotony of a long, landless passage, what proved unbearable was the lack of food aboard the sea-locked ships.

Much of the stores had already gone, carried off on the treacherous *San Antonio*. Such food as the three ships carried began to rot under the soggy tropical airs. The penguins and seals they had killed and salted in Patagonia started to turn putrid; maggots raged through the ships, eating clothes and supplies and rigging; water supplies turned scummy and rank. Men began to develop the classic symptoms of scurvy—their teeth loosened in their gums, their breath began to smell horribly sour, huge boils erupted from their shrunken frames, they sank into inconsolable melancholia.

In January men began to die. One of the Patagonian behemoths whom Magellan had persuaded aboard was, despite his immense physique and power, the first to go; he begged to be made a Christian, was baptized "Paul" and then died. By mid-January a third of the sailors were too sick to stagger along the decks. Their food was limited to scoops of flour stained yellow by the urine of rats, and biscuits riddled with weevils.

The depression and deep anxiety afflicted Magellan too. At one point he flung his charts overboard in a fit of rage. "With the pardon of the cartographers, the Moluccas are not to be found in their appointed place!" he cried. The fleet did, in fact, strike land in late January—a tiny island they called St. Paul's, and which seems to be the minute atoll now known as Pukapuka, in the French Tuamotu group. (Four centuries later, Pukapuka was the first island to be spotted by Thor Heyerdahl aboard the balsa raft *Kon-Tiki* after his long drift westward from Callao in Peru.) They stayed a week, replenishing their water butts and feasting on turtle eggs. They left in an optimistic mood; surely, they surmised, this island must be the first of a vast skein of atolls and lagoons stretching to the now close Moluccas. But it was not to be; the ships had barely traversed a third of their ocean. Soon the hunger pains, the racking thirst and the sense of unshakable misery began anew, and the dying began once more.

Sketch in Antonio Pigafetta's journal shows Guam (top), in "Islands of Thieves," and outrigger canoe.

After meals of leather—land!

More and more terrible the voyage steadily became. By March 4 the flagship had run out of food completely. Men were eating the oxhides and llama skins used to prevent the rigging from chafing (not too bad a diet—so long as the crew's scurvy-ridden teeth hung in). The smell of death, the knowledge that it was both inevitable and impending, gripped Magellan's sailors. And then dawned March 6, when a seaman called Navarro, the only man still fit enough to clamber up the ratlines, spied what everyone was waiting for—land.

A great cheer went up. Cannon were fired. Men fell to their knees in prayer. A squadron of tiny dugouts sped from shore to meet the Spaniards. Magellan had reached the islands he first called Las Islas de las Velas Latinas and later, after much of his cargo had been filched, Las Islas de Ladrones, the Islands of Thieves. He had made his landfall at what we now call Guam. It was March 6, 1521. Magellan had crossed the Pacific. A

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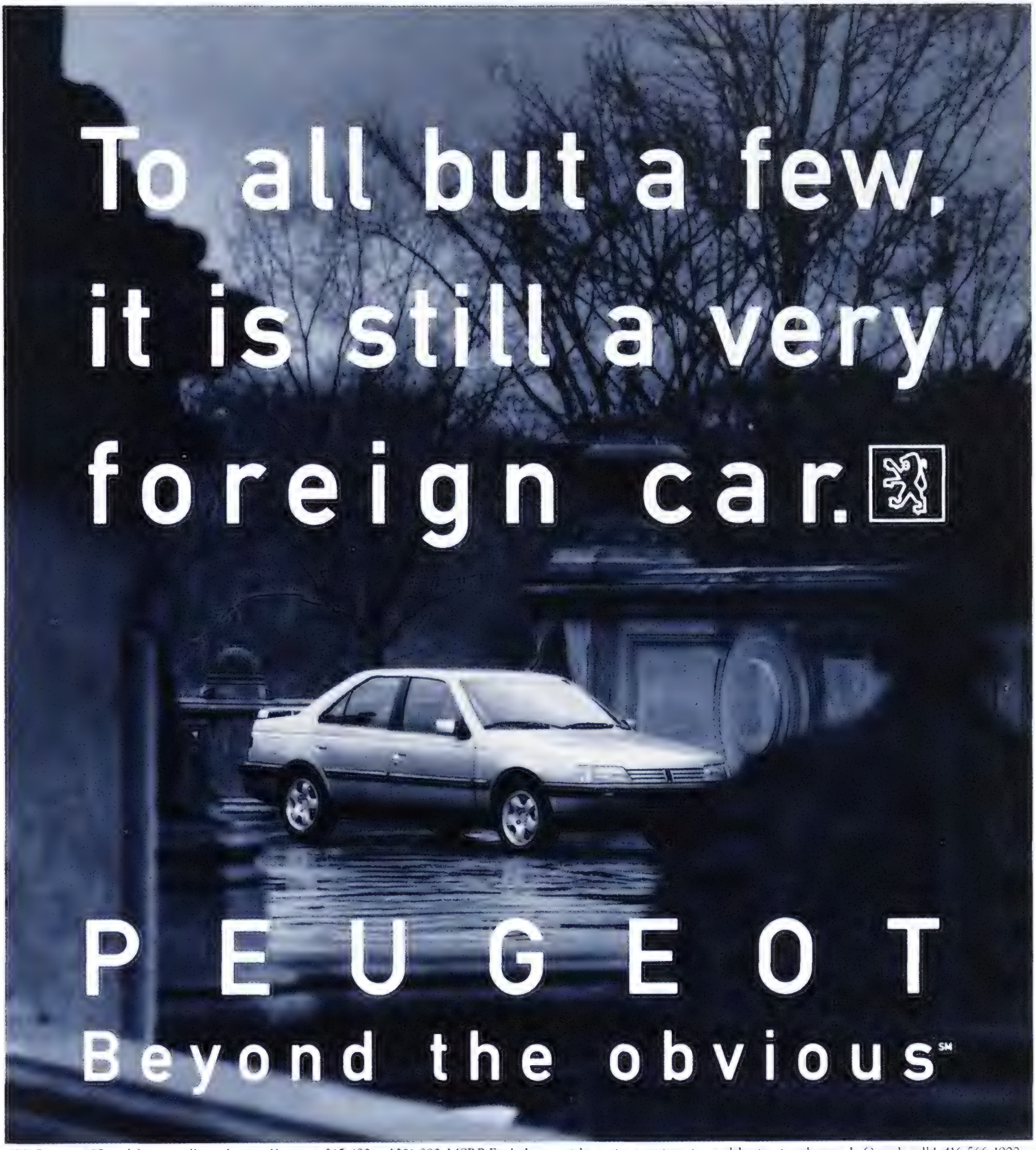

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Idealized in red coat and ruff, Magellan steers ship's pinnace close to shoreline, where he explored some of his 370-mile-long strait's shallow waters.

voyage the Captain-General had supposed might take three or four days had, in fact, occupied three and a half months.

The fleet stayed in Guam for only three days—to rest, make minor repairs and take on food (such as the "figs, more than a palm long," which must have been bananas) and fresh water. Then Magellan set off, still toward the Moluccas, standing down for the southwest and to the Philippines, islands of which all travellers to these parts had often heard, but which no European had ever seen. Though the Spice Islands, it must be recalled, were the armada's prescribed goal, the official mandate and ambition of Magellan was to discover, name and seize in the name of Spain the immense archipelago that lay north of them.

The only Briton on the expedition, Master Andrew of Bristol, died on this last, short passage. He was never to see the islands that, a novelist was later to write, were "as fair as Eden, with gold beaches, graceful palms, exotic fruits and soil so rich that if one snapped off a twig and stuck it into the ground it would start straightway to grow."

Magellan made his landfall on March 16 on an island at the southern end of the large Philippine island of Samar. Two days later, the first contact was made with Filipinos, though the name "Philippines" was not to be given to the place until 1543, when explorer Ruy López de Villalobos named one after the Infante, later to become King Philip II, the Spanish monarch whose reign made the words "Spanish Armada" infamous. (The name "Philippines" caught on later to mean the entire island group.) The significant moment came two days later still, when the ships sailed down the Gulf of Leyte and the Surigao Strait, where, more than four centuries later in World War II, one of the world's last great naval battles was fought, and Adm. William F. Halsey reduced the Japanese Imperial Navy to vestigial strength.

Once through the strait, Magellan landed at the island that guarded its entrance, Limasawa. Eight inhabitants sailed out to the *Trinidad* in a small boat. On orders from the Captain-General, his Moluccan slave, Enrique, hailed them. In a moment that must have seemed frozen in time, it became clear that the men in the approaching boat understood the words of the Moluccan perfectly.

Their language was being spoken to them by a man on a huge ship that had come to them from the east. The linguistic globe—even if not necessarily the physical globe—had been circumnavigated. A man who had originated in these parts had traveled across Asia and around Africa to Europe as a slave, and had now returned home by the Americas and the Pacific. Enrique de Molucca may well have been, strictly speaking, the first of humankind to circumnavigate the world; he was never to be honored for so doing.

Nor, by the unhappy coincidence of ill-temper and wretched misfortune, was Ferdinand Magellan ever to be able to savor his own triumph. Just six weeks after landing he was dead, cut down on a Philippine island

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Basque captain Juan Sebastian d'Elcano sailed ship home, the first European to circumnavigate globe.

in a skirmish that is as unremembered as the place in which it happened is unsung—a flat and muddy little island called Mactan, where an airport has now been built to serve the city of Cebu.

The circumstances of the Captain-General's end, however, are riven into every Iberian schoolchild's learning, even today. Despite his crew's objections, Magellan insisted on exploring. He was pleased at the relative ease with which the people took to Christianity. (It is perhaps worth remembering that the Catholic faith, which Magellan and his priests brought to Samar and Cebu and northern Mindanao, flourishes there still today. The Philippines, in fact, is the only predominantly Christian country in Asia, and the influence of the church contributed significantly to the recent overthrow of President Ferdinand Marcos.)

But the successful sewing of the seeds of Christianity were to be Magellan's undoing. His horribly inglorious end came in late April. The precise circumstances were chronicled. Magellan had demonstrated what he felt was his superior status to the local raja of Cebu, and had made Christians of him and all his followers. But significantly, the rest of the Philippine nobility did not go along. Many local junior rajas objected, especially the minor raja of Mactan, a man named Cilapulapu and now known to all Filipinos simply as Lapu Lapu. He declared that he was not going to pay fealty to this Christian interloper, come what may. He cared little enough for the raja of Cebu, let alone the Cebuano's newfound foreign friends.

The Spaniards soon got wind of this rebellious mood, and on April 27 Magellan and 60 of his men paddled across the narrow strait to Mactan, in an attempt to bring Lapu Lapu to heel. "You will feel the iron of our lances," Lapu Lapu was told by Magellan's interlocutor. "But we have fire-hardened spears and stakes of bamboo," replied a defiant chieftain. "Come across whenever you like."

The last stand at Mactan Island

The waters at the northern end of Mactan are very shallow and degenerate into warm swamps. A selected 48 of the Spaniards, dressed in full armor, had to wade the last few hundred yards to do battle with the Mactan warriors. They fought for an hour, thigh-deep in the water. Then Magellan plunged his lance into the body of an attacker and was unable to withdraw it quickly enough. It was a fatal delay. Another islander slashed Magellan's leg with a scimitar. He staggered. Scores of others crowded around him as he fell, and as Pigafetta was to write, "thus they killed our mirror, our light, our comfort and our true guide."

It is worth remembering that Fernao de Magalhaes was a native Portuguese—of whom it used to be said, because they were such energetic explorers, "they have a small country to live in, but all the world to die in." There is a monument near the spot where he fell, a tall white obelisk, guarded solicitously for the past 15 years by a man with the splendid name of Jesus Baring. There are two accounts of the event, one engraved on either side of the cross. Señor Baring derives much amusement from showing his occasional visitors—and there are very few, considering how globally important this spot should be—how markedly they differ.

The one on the monument's eastern side—the side that pedant geographers will recognize as marginally nearer to the Spanish Main—records the event as a European tragedy. "Here on 27th April 1521 the great Portuguese navigator Hernando de Magallanes, in the service of the King of Spain, was slain by native Filipinos. . . ." On the other side, by contrast, it is seen as an Oriental triumph—a heroic blow struck for Philippine nationalism. "Here on this spot the great chieftain Lapu Lapu repelled an attack by Ferdinand Magellan, killing him and sending his forces away. . . ." Baring points to the latter and roars with laughter. "This is the real story. This is the one we Filipinos like to hear!"

Lapu Lapu is thus the first, and to many Filipinos the greatest, of Filipino heroes. These days his memory is being revived, his exploits retold, his adventures made the stuff of comic strips, films and popular songs. Each April there is a full-scale reenactment of the

Battle of Mactan on the beach, with an improbably handsome Cebuano film star playing the part of the seminaked hero and, when I was last there, the Philippine Air Force officer Mercurion Fernandez playing the role of the armor-clad Magellan. The two sides struggle gamely in the rising surf until that epic moment when Officer Fernandez contrives to collapse into the shallow sea and grunts his last. The assembled thousands then cheer. Such is Filipino pride in the raja of Mactan that there are firebrands—in Manila as well as in Cebu—who believe their country should shed its present name, a reminder that it is a colonial conquest, and be reborn as LapuLapuLand.

Little more needs to be said of the tiny armada now, save to note what most popular historians choose to forget. The *Concepción* was scuttled; the flagship *Trinidad*, which tried to make for home via the Pacific once more, was blown north as far as Hakodate in Japan, captured by a Portuguese battle group and became a total loss in the Spice Islands, which had been its original goal. But one of the ships, the doughty little *Victoria*—at 85 tons she was the second smallest of the original five—did make it back to Spain.

The *Victoria* scudded home under the charge of Juan Sebastian d'Elcano, previously the executive officer of the *Concepción*. She made Java. She made it round the top of Africa, through waters where freak waves sometimes cause modern oil tankers to founder. She made the Cape Verde Islands, where the crew realized that despite meticulous log-keeping, they had lost an entire day from their calendar: the concept of crossing the international date line was unknown—and profoundly unimaginable—to them.

On September 6, 1523, the *Victoria* made the harbor of Sanlucar de Barrameda, from where she had set off almost exactly three years before. Juan Sebastian d'Elcano had brought just 17 men back with him: 237 had started out. Circumnavigation, it happened, was a most costly business.

But well rewarded. D'Elcano was given an annual pension and a coat of arms as handsome as it was aromatic: a castle, three nutmegs, 12 cloves, two crossed cinnamon sticks, a pair of Malay kings bearing spice sticks, and above all, a globe circled by a ribbon emblazoned with the motto *Primus Circumdedisti me.* "Thou first circumnavigated me."

Tragic death of Magellan occurred on the island of Mactan in a senseless battle with spear-wielding tribesmen who did not want to become Christian or acknowledge the power of the king of Spain.

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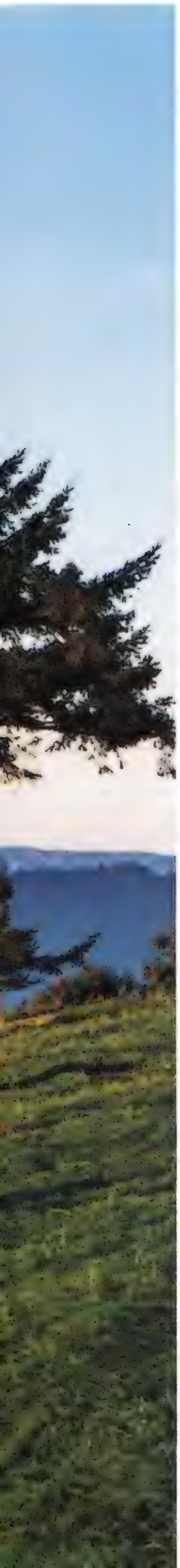

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Images of baseball show why it remains our favorite game

A vivid new book celebrates the national pastime with photographs of Americans young and old enjoying it at the grass-roots level

They call it "America's game," but sometimes you have to wonder. Is it still? And if so, why?

A sumptuous picture book just issued by Collins Publishers provides the answers. They are "Yes" and "Look out the window."

Last year Collins dispatched more than 70 newspaper and magazine photographers on a seasonlong quest to capture the essence of our many-sided pastime. This they succeeded in doing to a remarkable extent—not just in major-league ballparks but, even more tellingly, on local diamonds in towns and cities from coast to coast. The result, *Baseball in America*, demonstrates that for many of us the sport is no mere diversion on TV; it is an important part of everyday life.

Clearly we do still love to play this game and to watch others play it. Whether our favorite park is a lush greensward in Iowa, an inner-city lot in New Orleans or a minor-league stadium in Florida, it is a feature on our personal landscape that we would be hard put to do without. Face it: a neighborhood without a ball field is no neighborhood at all.

There is yet another reason why baseball still deserves to be considered America's game. As these stirring images so eloquently attest, it remains a curiously democratic form of competition. It is one in which we can all participate, no matter who we are or where we live, and it has the wondrous effect, somehow, of bringing us all closer together.

Jim Doherty

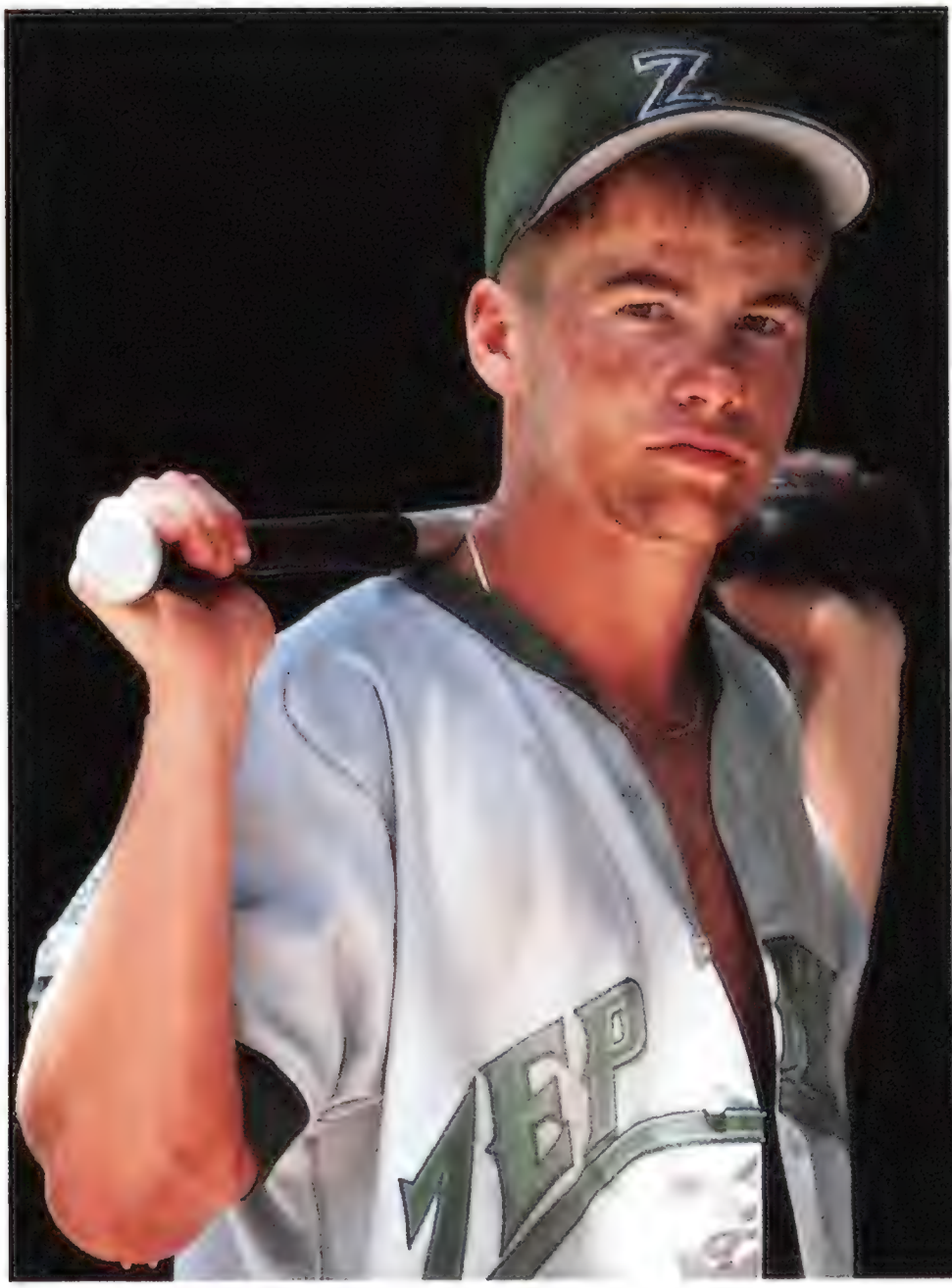
Boys of summer play catch on outfield in Westphalia, Iowa, where everyone (pop. 110) pitches in to pay for ballpark's upkeep. *Photograph by David Peterson*

In Scottsbluff, Nebraska, tiny Mikel Houston, 18 months old, tees up the ball. *Photograph by Bill Frakes*

Playing at first base for a Maryland college men's team, Julie Croteau eyes peg. *Photograph by Pete Souza*

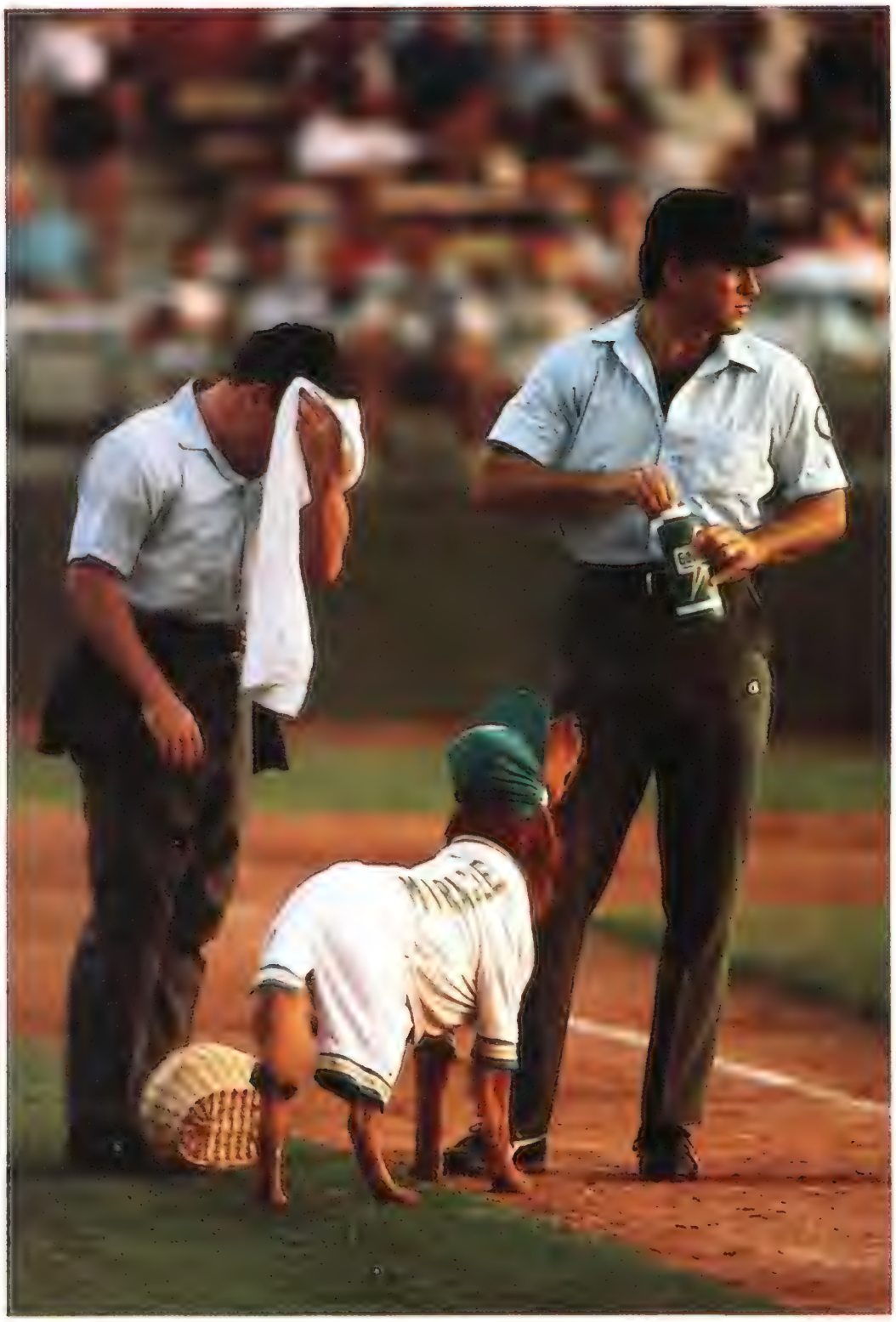
Some nonpaying fans in Pittsfield, Massachusetts, take a narrow view of game. *Photograph by Bradley Clift*

Matt Grewe, catcher on a team in Gering, Nebraska, tries to cool off. *Photograph by Bill Frakes*



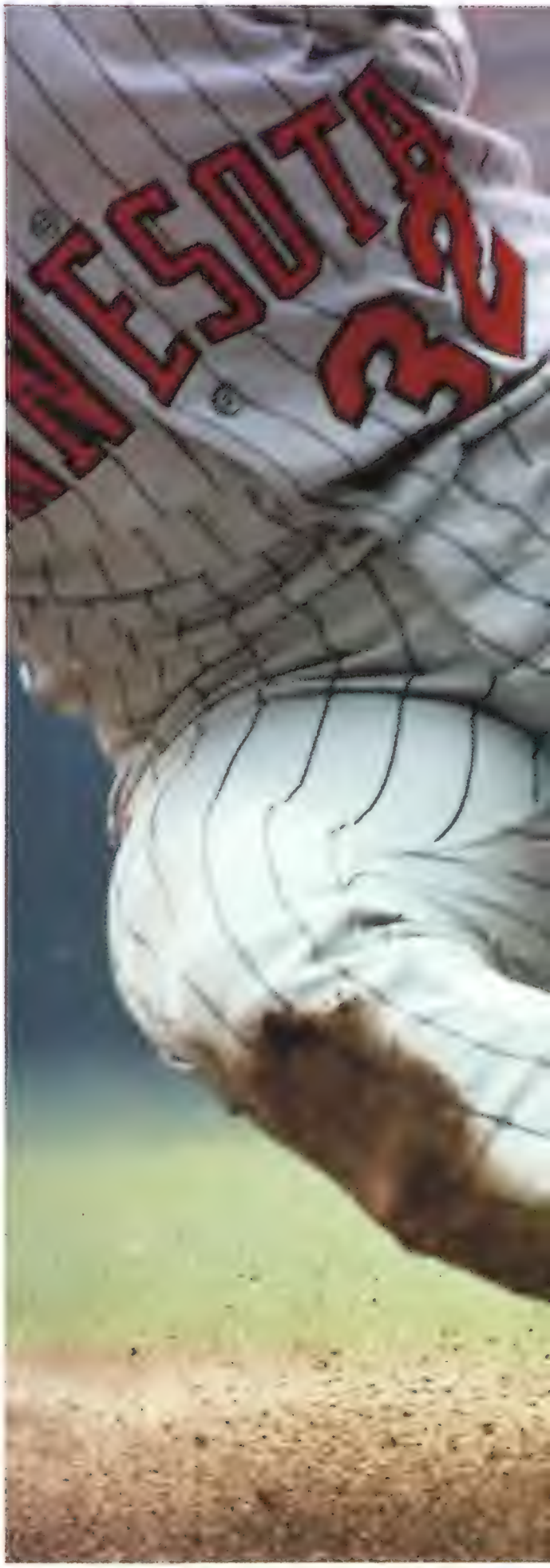
A bat and ball mean fun to 5-year-old Donson Daniels of Atlanta. *Photograph by Judy Griesedieck*

A Florida team's mascot delivers between-innings refreshment to umpires. *Photograph by Bill Frakes*



Anthony Gibson shows off prize bat near his New Orleans home.
Photograph by David Peterson

Fresno State, California, Bulldogs wait for a softball world-series game.
Photograph by Judy Griesedieck



Nolan Ryan, of the Texas Rangers, tucks into his distinctive pitching windup. *Photograph by John Biever*

A Minnesota Twin slides back
to first in game against Milwaukee.
Photograph by John Biever

An angry-looking sky belies the cozy atmosphere of a park in Salt Lake City. *Photograph by Rick Rickman*

Omaha boy has everything he needs for the game: hat, glove and hot dog. *Photograph by Rick Rickman*

In Baltimore, Bob Harvey, a star of the old Negro Leagues, meets new fans. *Photograph by Pete Souza*

Dodgers manager Tommy Lasorda gives a lucky kid some intensive tutoring. *Photograph by Caryn Levy*

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Is it any wonder that America is having a tough time competing in overseas markets?

UNCERTAINTY STIFLES ENTERPRISE.

The unpredictability of our liability system is also enormously costly to American competitiveness. For example, in a recent survey of CEOs, the Conference Board found that worry about potential liability lawsuits caused 47% of firms surveyed to discontinue one or more product lines. What's more, 25% stopped certain product research and development, and 39% decided

against coming out with a new product. Meanwhile, our overseas competitors continue to research and develop new products at an ever-increasing pace.

ARE WE CONTROLLING RISKS OR INCREASING THEM?

When we give a drunk driver the right to sue an automaker or highway engineer for a million dollars after a crash, are we controlling risk?

Or just encouraging risky and careless behavior?

If you are a manufacturer, you can be sued even if your product has state-of-the-art safety features. Even if your customer misused it against your instructions. Even if the risks of misuse were obvious.

When fear of lawsuits causes physicians to limit

ity system is essential if in overseas markets.

services to patients—or worse, to abandon their practice altogether—lack of adequate treatment means greater risks for everyone.

Is this controlling risk or increasing it?

It's an unhealthy and dangerous situation that needs correcting.

We must reform our "deep pockets" approach to liability.

Specifically, we need to change our approach and base liability suits on fault.

Our current system often encourages the frivolous suing of those with the ability to pay—in other words, those with "deep pockets." But does it make sense to hold such parties entirely liable, even if they were only minimally at fault?

A more rational approach.

Those who suffer economic losses because of another's negligence should be fairly reimbursed. No one could argue with this principle. There should also be just compensation for pain and suffering resulting from real and severe injuries.

But can we afford to continue a system that encourages litigation and financial judgments bearing little direct relationship to fault or to the actual cost of injuries suffered?

Clearly, a better approach is needed.

Congress has a role.

Legislation providing a uniform product liability standard would allow American companies to compete without the burdens of excessive liability risks. And this would unclog the courts and put American business in a stronger position as barriers to international trade and investment fall.

There is proposed legislation before Congress dealing with these issues. A solution to the liability crisis is vital to American competitiveness, and Congress can play a role in restoring the right balance.

So do the courts.

When all is said and done, our courts are the interpreters of our laws and our values. It's our values as a society that count, especially as reflected in the courts and individual jury decisions.

Together our legislative and judicial branches must recognize the damage being done to American competitiveness from the current liability system. And help America restore the proper balance.

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AIG (American International Group) is the largest underwriter of commercial and industrial insurance in America, and the leading U.S.-based international insurance organization.

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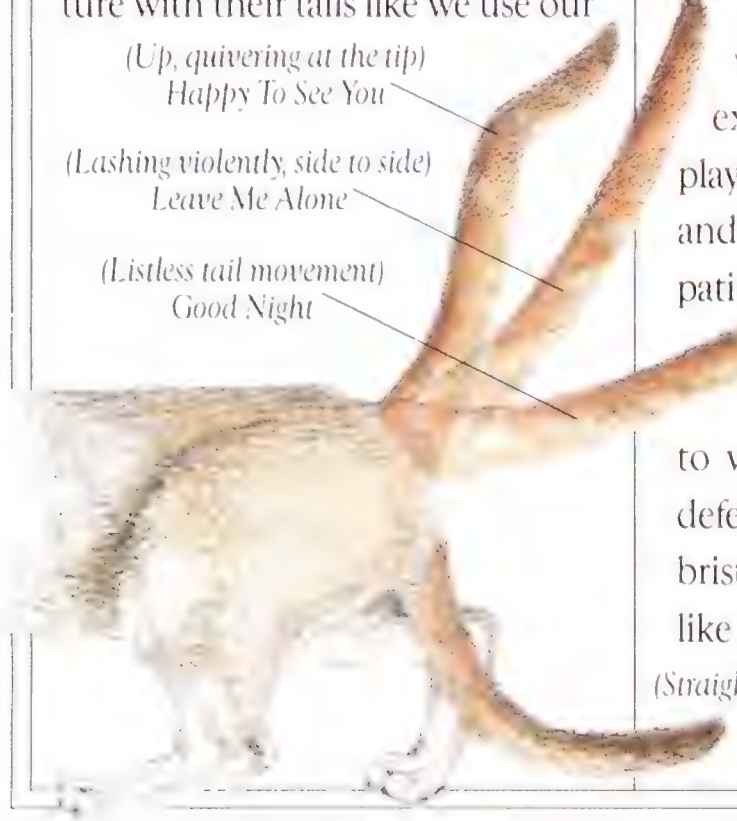
How To

START BY READING HER FACE

When she looks at you, what is she saying about her state of mind? An alert cat has erect ears and narrow pupils. A frightened cat's ears flatten and her pupils widen. A relaxed cat shows her pleasure through half-closed eyes.

HER TAIL HAS A LOT TO TELL

Talk about a mood swing. Cats gesture with their tails like we use our arms—for emphasis. Notice the vertical position of her tail when she says hello; when she's excited, the tip will quiver. A playful cat will move her tail back and forth on the ground, in anticipation. And steer clear of the angry cat and her violently swishing tail. What to watch for when she's on the defensive: an arched back, and a bristled tail that sticks straight up like a bottle brush.



IS SHE SAYING "FOOD" OR "OUT"?

Your cat has a lot to tell you. You just have to know how to listen. In fact, she's capable of at least sixteen different vocalizations. In multi-cat households, the cats talk to each other. But the solitary cat is trying her best to communicate with *you*. Listen to the tone of her meow when she's begging for food and compare it to the tone she uses when she wants to go outside. Cats even have a unique meow they use to greet you, just as you have a special call for them. The best sound of all? Any cat lover will tell you: purring.

SPEAK CAT.

UNDERSTANDING HER BODY LANGUAGE

Her skin and coat are beautiful. They're also functional. The looseness of her skin helps her slip from an aggressor's grasp. In fact, the skin on the back of her neck is five times thicker than the rest of her body.

Maintaining a healthy skin and coat requires a great deal of protein. For that matter, so does keeping the whole body healthy.

And that means the proteins found in meat. Cats need almost five times as much as humans do, in fact.

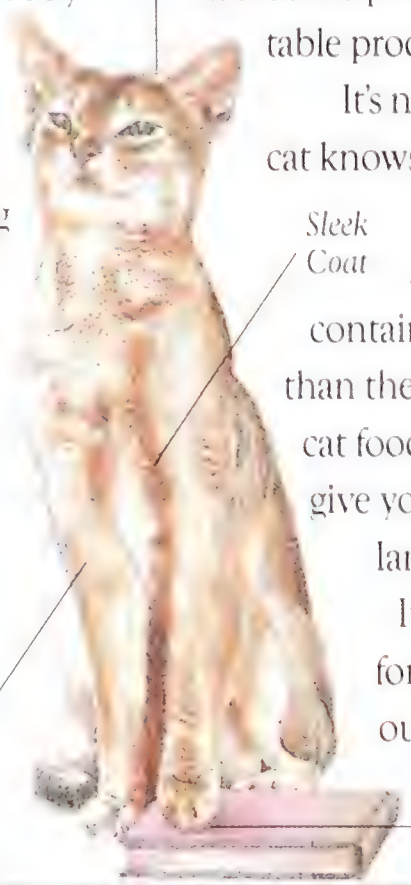
Cats are carnivores. Always have been. They're supposed to eat meat. It's one of the most important requirements in their diet.

Cats also happen to love and crave meat. Meat stimulates their taste buds and their sense of smell.

But the leading supermarket cat food is primarily grain and vegetable products with little meat.

It's not the same and your cat knows it.

That's why cats should eat Iams. Iams contains more meat protein than the leading supermarket cat food. So if your cat could give you the bottom line on Iams, it'd simply be this: If you're in the market for the best cat food, get out of the supermarket.



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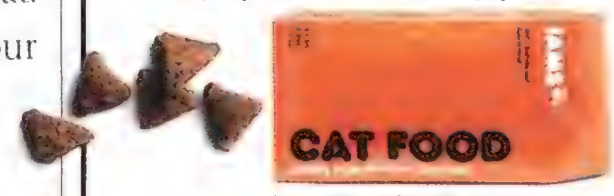
From weaning through the first year and for pregnant or lactating queens.



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For the overweight, spayed, neutered or under-exercised cat.

IAMS®

TREAT HER LIKE A HUMAN,
FEED HER LIKE A CAT.

The Prices relax in teahouse of their new California home; an Edo Period scroll hangs in the tokonoma.

By Michael Webb

An Oklahoman's love for paintings from old Japan

Joe Price amassed a splendid collection of Edo Period scrolls and screens, and then helped create a unique home for them in Los Angeles

Joe Price is no stranger to controversy. As an oilman in his native Bartlesville, 40 miles north of Tulsa, Oklahoma, he commissioned a house from maverick architect Bruce Goff that would have slowed traffic if it hadn't been a mile off the road. Tired of laying pipe for his father's company, he quit work, chartered a schooner and sailed to Tahiti. He bought Japanese artworks of the Edo Period (1615-1868) when they were scorned by connoisseurs, assembling one of the world's finest collections. Goff eventually designed a futuristic pavilion to exhibit these fragile scrolls and screens, and when it was built on Wilshire Boulevard in Los Angeles, traffic slowed to take it in.

"Originally," recalls Price, "my idea was to build the whole thing on my farm in Bartlesville. That way it would be as I wanted it—but nobody would see it. I had never done anything with other people before, and everybody back home said that if I went to a big city they'd think I was some dumb Okie and swallow me alive. I came to Los Angeles and, sure enough, I've had terrible conflicts with big-city egos. But I'll tell you this: it's a lot more fun than laying pipe."

The Pavilion for Japanese Art at the Los Angeles County Museum of Art, depicted here in an Edo-style rendering by designer Chris Hopkins, exhibits the scrolls and screens of the Shin'enkan Collection.

It's hard to imagine this reticent, delicately built man, with his dark suit and silver hair, as an engineer on the prairie, flying off for months at a time to Alaska's North Slope and the Arabian Desert. He is reluctant to recall those years, as though they belonged to a broken marriage that he would rather forget. "Fishing is the only thing I miss," is all he will say about Bartlesville. The stammer that punctuates his Midwestern drawl becomes more pronounced, and he seems to retreat into his private world of beauty. But however uncongenial small-town Oklahoma may seem to him in retrospect, it allowed Joe Price to follow his own path.

Born in 1929, he was a small boy when his father's technique for welding oil pipelines began to transform a one-man business into an international corporation. He joined the family firm at age 17 and studied engineering—a subject he says he hated—at the University of Oklahoma. But what excited him were the lectures of Bruce Goff, the dean of architecture. Self-taught and homespun, Goff was a child prodigy who designed his first building in 1919, at age 15, while still a part-time apprentice in a Tulsa firm. He idolized Frank Lloyd Wright and helped bring him together with Joe Price's father, Harold, who needed new corporate offices. As Joe tells it, his father asked Wright for a three-story, ranch-style building; the architect talked him into a 19-floor design that Wright had first proposed in 1929 for a site on New York's Lower East Side. Wright sold his client on the tower as a symbol of success and on the prospect of surveying Bartlesville from his penthouse office. It would be the small town's most distinctive high rise.

Joe Price became a go-between, relaying messages from his father to Wright. Each man insisted that things be done his way; mediating between them, the son honed his diplomatic skills and learned about architecture. When the tower was completed in 1956, the delighted father commissioned a house from Wright; and Wright, in turn, regarded "little Joey" as one of his protégés.

But when Joe Price decided to create his own bachelor pad on the family farm, he gave the job to Goff. Wright, he now explains, designed houses that incor-

porated the landscape, while he wanted to shut out the broad vista of rolling hills and create an inner world of stillness—"as though you were inside a cloud." Goff took five years to create what was, before two later additions, little more than a one-room studio. But it was as startling an apparition on the land as the Emerald City in *The Wizard of Oz*.

Finished in 1958, the original low, angular structure was sheathed in gold anodized aluminum that seemed to emerge from walls of Kentucky coal accented with blue and green glass slag. Within the living area, a hexagonal conversation pit was bathed in light from above, which was softly diffused by a baffle of goose feathers. Smaller windows were shuttered with purple glass. Price had the idea of covering the sloping walls and conversation pit with white shag carpeting, telling his incredulous buddies to take off their boots as they entered. "At parties, if you stand around drinking, you talk about the weather," he observes, "but if you sit on the floor you get into wonderful conversations."

Price's collecting began soon after he graduated from college. On a trip to New York City, as he walked down Madison Avenue, some scrolls in a gallery window caught his eye. He went in and asked about them, and soon several hundred were brought out from the back. During the ten years following his initial purchases, he never paid more than $200 for any work. Untutored in art, ignorant of the names and conventions of Japanese painting, he bought what he liked: scrolls and folding screens characterized by bright colors, technical brilliance and a feeling for nature. Much later, he learned that everything he'd acquired had been painted by six leading artists within a 50-year period. This convinced him that he should continue to trust his own judgment.

The art Price collected had been commissioned by prosperous merchants during the Edo Period, 250 years of Japanese seclusion that ended soon after Commodore Perry's arrival in 1853. Ruling from their capital city, Edo (now Tokyo), the shoguns created a rigidly ordered society, largely immune from infection from the outside world. After centuries of turbulence and civil war, people welcomed the stability and accompanying prosperity. Samurai were at the top of the social ladder, merchants at the bottom, farmers and craftsmen in between. In fact, as Robert Singer, curator of Japanese art at the Los Angeles County Museum of Art, points out, "the samurai clung to their dignity and privileges, while the merchants had most of the money and most of the fun." Hedonistic and unin-

Tiger, a hanging scroll painted by Katayama Yokoku, depicts a subject that was popular with Edo artists.

She worried
whenever he rode
"that dumb motorcycle."
A ten minute ride
to the supermarket and
she was a bundle of nerves.
So, when John Drimmer
announced his plans
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to Seattle and back,
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Bruce Goff specified anodized aluminum, glass slag and other unusual materials for Price's bachelor pad.

Frank Lloyd Wright's high rise for Price's father in Oklahoma was Price's introduction to architecture.

hibited by convention, determined to defy the official ban on flaunting their wealth, the merchants demanded bold and innovative art.

When Japan opened to the West, foreigners snapped up popular prints, which were then so little regarded they were sometimes used as wrapping paper. These images of courtesans and Kabuki actors, landscapes and flowers, decisively influenced modern European artists, especially the French Impressionists.

But in the field of painting, most Westerners shared the prejudice of Japanese scholars against Edo artists of the 18th and 19th centuries. At first, this attitude was a product of Japan's reaction against its feudal past, as the country embraced Western values with uncritical zeal. Later, as the pendulum swung back to tradition, interest revived in pre- and early-Edo paintings, and in such Edo art forms as ikebana (stylized flower arrangement) and the popular Kabuki theater. But later Edo paintings still bore a taint. "Imagine asking an American scholar to study the kind of art that Archie Bunker would collect," says Price with a touch of exaggeration. "That's what educated Japanese thought of the merchants and their taste until a couple of decades ago."

Price made his first trip to Japan to collect not art but a visa. In 1960 he decided to fulfill his dream of escaping from the pipeline business to sojourn in Tahiti. He told his father, expecting a lecture on responsibility and family loyalty. Instead, the old man growled: "What took you so damn long?" Price bought a schooner and rounded up a captain and crew. He wondered how he would survive the boredom of weeks at sea, but getting there was the best part. "After 36 days, I was sorry when the voyage was over. I cried when I saw land," Price recalls. "The ocean and the seabirds gave me an enduring love of nature."

"You like that? I've got lots of those!"

Tahiti was as beautiful as he had expected, but the French authorities insisted he leave as soon as his visa expired. To renew it, he flew to Japan. Immediately feeling at home, he stayed for six months, even though he never learned more than a few words of the language—and still hasn't. The food, the gardens and the daily rituals delighted him. So did collecting. Word got around that a crazy foreigner was buying art that had been hidden away and considered unsalable. He remembers: "I would go to someone's house, they'd pull out paintings, I'd pick one and they'd say: 'You like that? I've got lots of those!' and bring out armloads." Eventually, others got interested too. He contends that the turning point came in 1971, when a group of his acquisitions was included in a landmark exhibition in Tokyo of Ito Jakuchu's paintings (p. 120).

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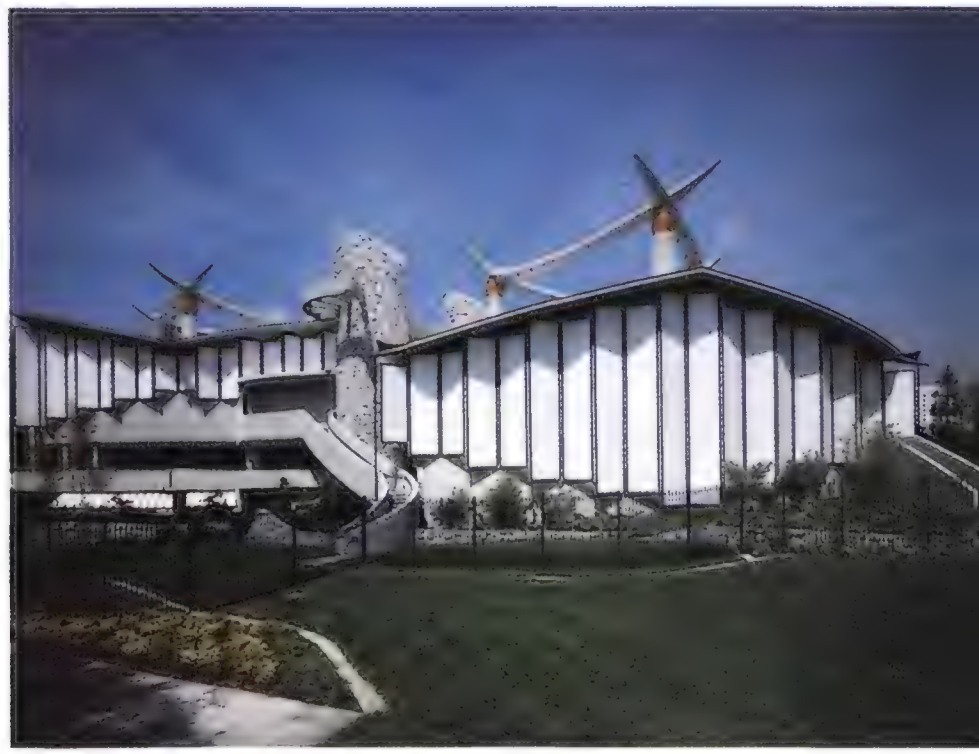

In designing the new Pavilion for Japanese Art in Los Angeles, architect Bruce Goff's challenge was to create intimate exhibit areas bathed in natural light. His solution: central pillars supporting beams, from which hang cables that hold up the graceful roof. This allows the building to be clothed in a non-load-bearing translucent wall, which lets in outdoor light. In the east wing (opposite), viewing niches are spaced along an outer spiraling ramp.

"It created a sensation," Price recalls. "The catalog sold out shortly after the show opened, and people lined up to view work that had never been publicly shown before."

During his first stay in Japan, Price met a young Japanese woman named Etsuko, whom he would marry in 1966. They settled in Bartlesville, expanding Price's small house as the family grew. But the couple has continued to visit Japan for two months each year.

In spirit, Price and his wife brought Japan with them on returning to Bartlesville. They slept on futons amid the artworks, guarded by their Great Dane, Kamikaze. Price named his collection "Shin'enkan," which he takes to mean "house of the faraway heart." Etsuko explains that this is more than a poetic title: "It means that you should leave the ugliness of human life behind and contemplate the art with a pure heart"—a concept drawn from Zen Buddhism.

As the collection grew, Price began to look for a place to display it. After considering several institutions, he floated the idea that he might donate it to the Los Angeles County Museum of Art (LACMA). Earl (Rusty) Powell, the museum's director, had known about the Shin'enkan Collection while he was still a student at Harvard. "It had a mythic reputation then," he recalls, "because nobody I knew had actually seen it." In 1981 Powell flew to Bartlesville to talk. Two years later, an agreement was reached: the collection would come to LACMA, and Price would donate $5 million toward the cost of a new building, designed by Bruce Goff, to house it. Price established a temporary home in Los Angeles so he could watch his new child, the Pavilion for Japanese Art, being born.

Los Angeles was an appropriate choice in many ways. No American city except Honolulu has stronger commercial and cultural ties with Japan. It was created, in large measure, by unconventional types and is still hospitable to them. The city had its own brief oil boom at the beginning of the century, and the area around LACMA was once filled with nodding pumps. The J. Paul Getty and Armand Hammer museums exemplify the link between oil wealth and art collecting.

The challenge for Goff in designing the Japanese Pavilion, his last major work, was to create intimate, naturally lit viewing areas within a public gallery. In a traditional Japanese house, a single scroll at a time is hung within a niche called a tokonoma, while decorated screens are used singly or in pairs to block drafts and define private areas within a room.

By 1980, Goff had a final plan. Artworks were to be displayed individually in multilevel alcoves resembling tokonomas. These freestanding enclosures would be contained within an unbroken, curvilinear shell, with a self-supporting ramp carrying visitors past them. The entire pavilion would consist of two wings flanking a central tower. The wings' free-flowing roofs would be suspended by cables hung from beams; the ends of the beams would be upturned like those of a Japanese torii (a Shinto shrine gate). The walls, released from their load-bearing role, would be translucent fiberglass panels, admitting natural light like rice-paper shoji screens.

Within, Goff solved the two major problems that bedevil Frank Lloyd Wright's Guggenheim Museum in New York: there, visitors must view paintings from the slope of a spiral ramp, and the building's central void overwhelms the art. In Goff's plan, the ramp skirts the outer wall, and the art is placed at the center of the void, with teardrop-shaped viewing platforms creating level bridges across the space between.

Just before his death in 1982, Goff handed over the job to Bart Prince, a kindred spirit who had worked on the design from its inception. Prince developed the working drawings and saw the project through. With the remaining $8 million raised by LACMA, some of it from Tokyo-based corporations, the innovative pavilion was built, opening in September 1988.

Architect Frank Gehry (SMITHSONIAN, April 1987) once remarked that, in a city as eccentric as Los Angeles, every building becomes a part of the context five minutes after it is finished. The Japanese Pavilion is next to the La Brea tar pits, a reminder of the city's oilfields and a graveyard of prehistoric animals. To one side, a Disneyesque tableau re-creates that drama; a fiberglass mammoth appears to sink into the ooze as two others watch in despair. The pavilion is flanked by LACMA's new Anderson Building, with its sheer stone and glass-brick facade; and by the Page Museum, with its space-frame canopy and sculptured frieze. But the Goff-Prince design holds its own with the competition. Paul Goldberger, the *New York Times* architecture critic, likened it to a 1957 De Soto. Local writers have noted its resemblance to futuristic coffeeshops built in the 1950s, with their tilted roofs and boomerang projections.

Suspended in a fathomless void

In the Pavilion's west wing, two levels of galleries exhibit LACMA's sculptures, textiles and other works, including the dazzling Bushell collection of netsuke. Below them is an area for study and storage. In the east wing, a ramp winds past scrolls and screens selected from the Shin'enkan Collection, supplemented by earlier works from the museum's other holdings. A new choice is made every six weeks; this rotation schedule protects the paintings' delicate surfaces from too much exposure and enables visitors to see the entire collection over a one-year span.

Walking down the ramp with its transparent Plexiglas rail, pausing at each platform, one feels suspended, weightless, in a fathomless void. Water gurgles softly in a pool below, which reflects the tentlike vault. The artworks are suffused with a shadowless light from the translucent walls.

When the sun is low, the intensity of the light from the south-facing wall becomes greater; this has provoked one of several disagreements between donor and host. Joe Price argues that, since Goff intended this gallery to face north, and Prince was obliged by the site to reverse the orientation, the south wall should be screened by trees. Rusty Powell insists that, according to his conservation experts, the light never exceeds the limits of safety, and that trees would cast distracting shadows through the fiberglass panels. They also disagree on the amount of artificial lighting needed to supplement natural light on overcast days.

Whatever the differences of opinion, public and critical response has been enthusiastic. More than 400,000 people saw one or more of the first year's exhibitions of highlights from Shin'enkan. Japanese visitors delight in the novel experience of viewing scrolls one at a time in natural light, because museums in Japan display them in the same way that Western art is displayed in this country. And almost everyone likes exhibitions that illustrate the diversity of a subject, a season or an artistic school. For example, one exhibit, entitled "Legends and Animals," included numerous tigers,

Los Angeles writer Michael Webb specializes in architectural subjects; his latest book, The City Square, *explores public spaces around the world.*

One of a pair of folding screens entitled *Birds, Animals and Flowering Plants* mimics a mosaic, with thousands of painted squares of color. Artist Ito Jakuchu rued he had never seen many of the animals.

Because of Japanese dislike of ghosts, Price got a bargain in this haunting image by Nagasawa Rosetsu.

such as the goofy, cross-eyed creature by Katayama Yokoku. It looks oddly misshapen, with tiny ears and a flattened nose (p. 114). "Tigers were a symbol of power in Japan, a zodiac sign—like the dragons that symbolized tornadoes," says Price. "Samurai wore tiger skins in battle, but artists had never seen them in the flesh because there were no menageries."

Also in this show was a selection of ghosts, including an ethereal study by Nagasawa Rosetsu (left). Price chuckles when he remembers the trouble a similar ghost scroll caused him. He knew that most Japanese hate ghosts and persuaded the seller to let him have the scroll for a tiny fraction of the asking price, convincing him that nobody else would even consider taking it. He brought it home without telling Etsuko. That night she had a bad dream about it, making Price wonder if he shouldn't take it back. Before he could do so, she told him that she knew there was a ghost in the house, but she had made her peace with it.

One of the collection's most valued treasures is the sequence of scrolls by Sakai Hoitsu, *Birds and Flowers of the Twelve Months* (opposite). Chronicling the changing seasons, the scrolls had been displayed one at a time, in the tokonoma of their original owner's home, throughout the year. Hoitsu's style is characterized by elegance and refinement. At the other extreme are the portraits of courtesans and Kabuki actors, the pinups of their day, commissioned by the merchants who spent their nights in the theaters, bars and brothels of what was called Ukiyo-e—the floating world of temporal pleasures. Some of these earthy paintings have a sharp humor, exemplified by Kawanabe Gyosai's *House of Pleasure*, in which a bearded Zen sage scowls disapprovingly at a riotous drinking party.

Most modern in spirit are the so-called Kyoto eccentrics—those individual painters who belonged to no school and struck out on their own. Ito Jakuchu was one. In a pair of screens, *Birds, Animals and Flowering Plants* (opposite), he created a bright mosaic-like composition consisting of 80,000 painted squares. Like Katayama Yokoku, Jakuchu had never seen live tigers, elephants or other animals he depicted.

Joe Price could no more leave his art than abandon his family, so he and Etsuko found a tranquil retreat on an oceanfront site not far from the city. They wanted a house, they told Prince, that would express the spontaneity of Tahiti and the ritualized beauty of Japan. Prince has given them a habitable sculpture; a grove of polished-wood trees supports a complex, interwoven structure of rooms and decks that seems to grow out of the land and the ocean. At its core is the teahouse, which symbolizes Etsuko's roots; in it is a traditional Japanese room with tatami mats, sliding shoji screens and a tokonoma. Nearby is a study center for those scrolls not currently on exhibit at LACMA. The teahouse was built in Kyoto, then taken apart and reassembled in California by the original craftsmen.

Price is most at home in the teahouse, where he brings out his favorites for anyone he thinks will share his passion. He unrolls a scroll by the animal painter Mori Sosen with boyish enthusiasm, words pouring out, his stammer almost forgotten. "What makes this picture of a monkey watching a wasp so remarkable is the animal's concentration and the tautness of its feet, ready to spring toward the bug. The white parts of its body are made, not with paint, but by allowing the paper to show through."

Scholars visiting Price, especially those from Japan, enjoy viewing scrolls with him. Often he will hang them side by side, allowing comparisons between two masterworks or between an original, a fake and a masterwork by the artist who painted the fake. "Japanese archives often limit scholarly access, and it would be considered impolite to ask a private collector to hang two works at once," says Price, who goes out of his way to buy fakes and copies so that he can educate his own eyes and pass his knowledge on to others.

From Bartlesville, Oklahoma, to Edo Period Japan is a step that few could take with such apparent ease. Joe Price has a foot in both cultures, but it is clear which way he would jump if he had to make a choice. "For some reason I have absolute confidence in being original," he remarks. In the case of Joe Price it isn't boasting, but a plain statement of fact.

One of a 12-scroll set, *May* once graced the tokonoma of a wealthy Japanese merchant during that month.

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The *Aquarius*, with gazebo-like emergency shelter in foreground, lurks on bottom (left). Divers had the porthole to themselves (center) before Hurricane Hugo. Mother guards eggs (at right) attached to the glass.

For one mother, it was any port after the storm

An octopus slithers into a dark crevice to attach her eggs, not knowing she has chosen the window of a divers' shelter

A blessed event is where you find it—under a cabbage leaf or behind the steel cover protecting a porthole of an underwater habitat in the Caribbean. The mother in the photographs on these pages is a Caribbean reef octopus, who deposited her egg mass in what seemed to her a protected place, guarded the eggs for more than six weeks and then—as they began to hatch—wandered off to die.

The spot she chose was the *Aquarius*, an undersea home and laboratory in which six people can live for up to ten days, with hot meals and hot showers, while diving for as long as nine hours a day. In 1989, the *Aquarius* was resting on a sandy bottom in 62 feet of water off the island of St. Croix. After Hurricane Hugo passed over the island in September, divers returned to their underwater base to see how it had fared.

They found little damage, but discovered an unexpected guest. The galley porthole has a square cover that is closed when no one is home, to discourage the growth of fouling organisms. The two-pound, 15-inch octopus had squeezed herself through the three-quarter-inch gap between the cover and the domed metal frame around the porthole. She deposited her eggs on the glass in the well created by the porthole frame. When discovered, she was skittish, trying to withdraw from divers who approached. After three days, however, she had relaxed and would move out to greet her visitors, climbing onto their heads and shoulders.

The divers took her under their protection, keeping hungry fish at bay by fanning them away from the port and feeding them lavishly at the opposite end of the *Aquarius*. The mother did not eat for the weeks she guarded the eggs and became visibly smaller, according to Michael Paul Herko, the diving officer who took the photographs. On a Friday, divers saw that the eggs were ready to hatch. The next day, eight of the eggs had already ruptured when the divers returned. As they watched, more young octopuses, each about the size of a pinkie fingernail, hatched. Squirting minuscule clouds of ink, they took cover in algal growth around the edge of the port, changing color to match their surroundings. The divers saw only one eaten by a fish.

The mother, however, had disappeared. These octopuses have a life expectancy of only a year. They mate during a single season—the male dies soon after, and the female lives only long enough to brood her offspring until they hatch.

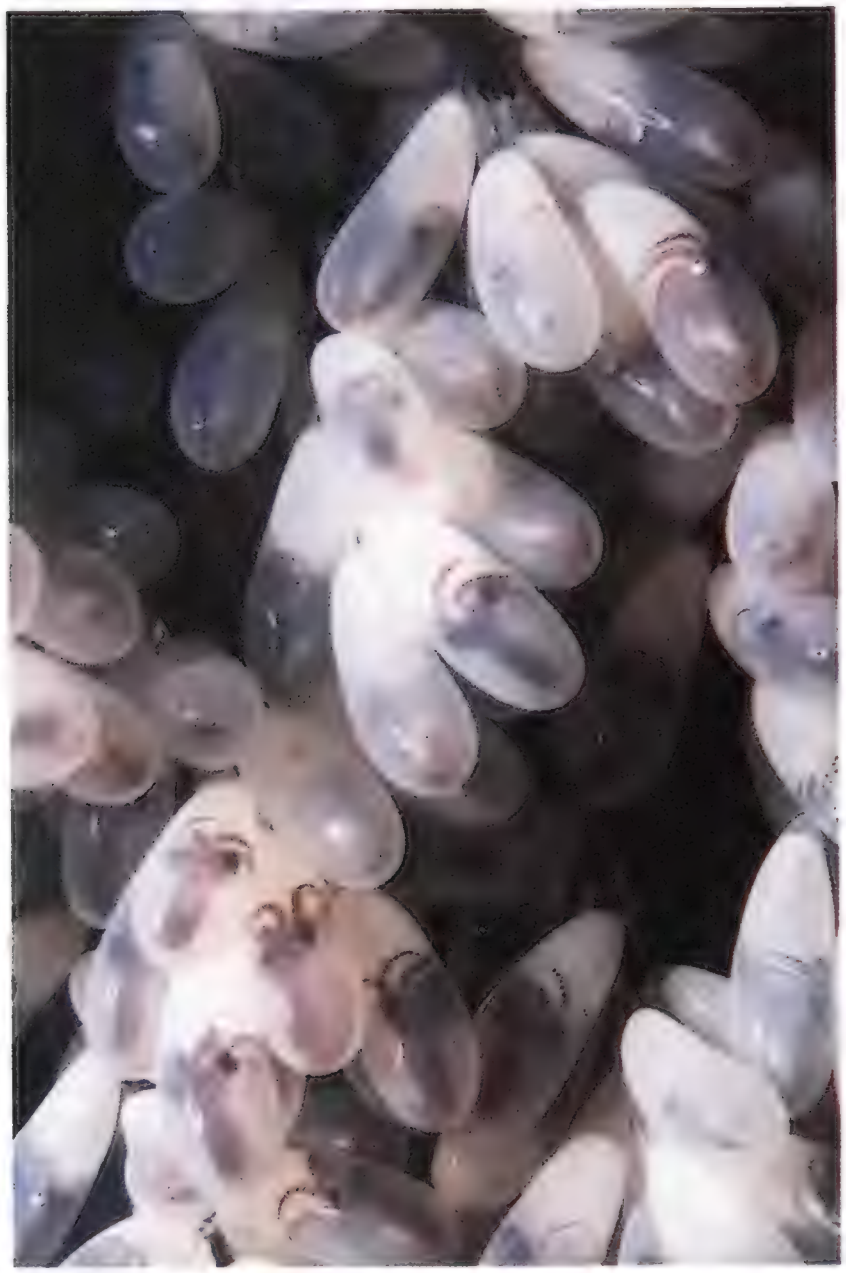
The *Aquarius* is gone now, resting on a barge in North Carolina's Cape Fear River until her next assignment. Of the baby octopuses that first saw life on one of her portholes, a few have since grown up, mated and died. But somewhere on the reefs of St. Croix, the age of Aquarius lives on.

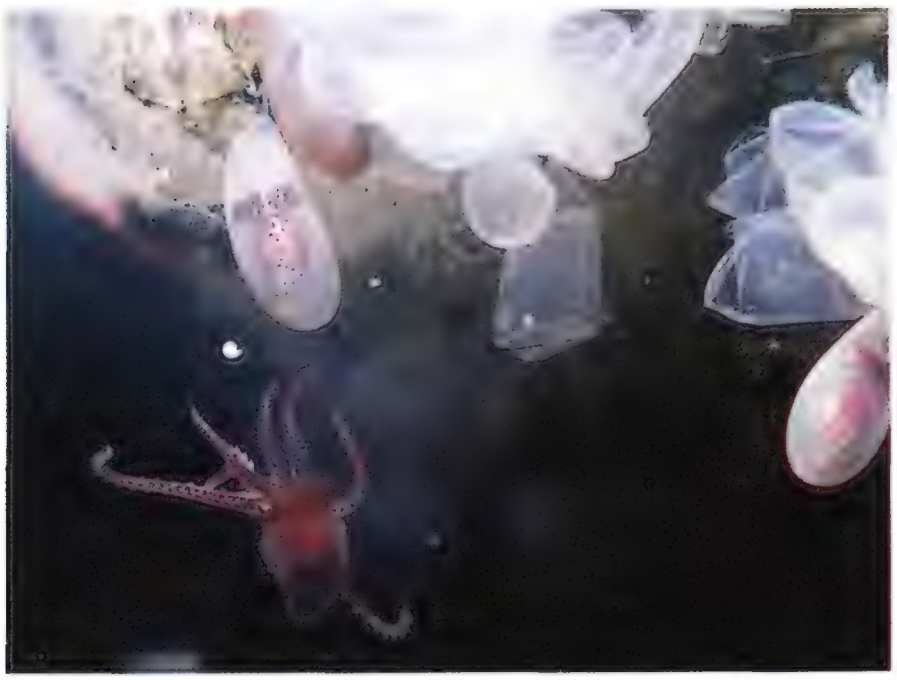
John P. Wiley jr.

Inside eggs still half-filled with yolk, the babies are clearly octopuses three weeks before hatching.

White luminous circles are reflections from the circular flash equipment used by the photographer.

Photographs by Michael Paul Herko





As time passes, the spots and eyes become darker, eggs more transparent (top left). Ten days before hatching, young cephalopods almost fill the space available (top right). Just after hatching, a baby floats down to find a hiding place in algal mats on the sea floor (above). Even before hatching, these octopuses can squirt ink, change their color and skin texture, to elude predators. Pencils inside porthole give scale to a baby who bumped into the glass and slid down to safety (at right). Of the hundreds that hatched, only a few lived to breed.

Ektachrome
SLIDE

Be there!

Kodak Ektachrome FILM

Kodachrome FILM

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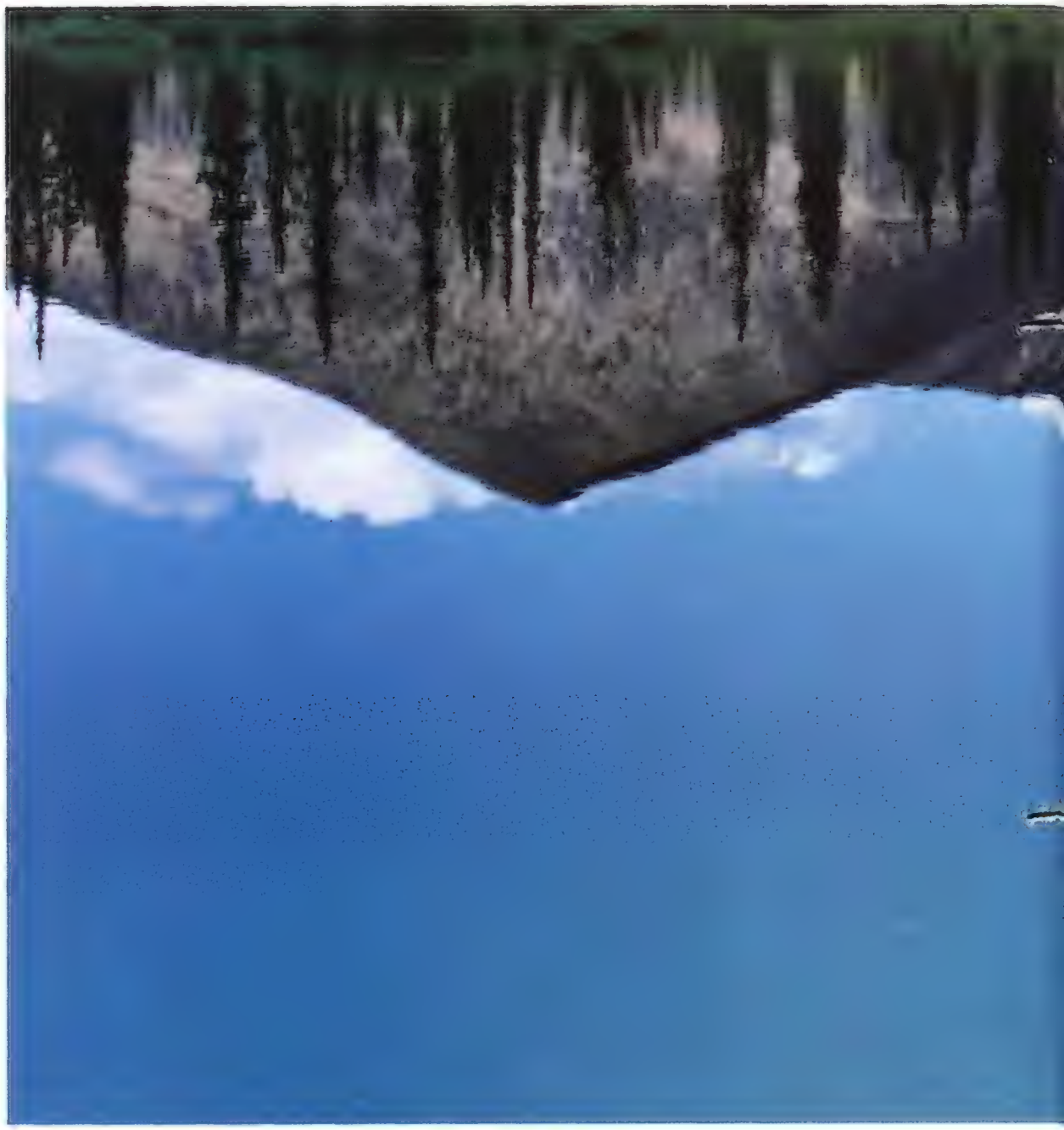
Happily, there is nothing at all



Up with the dawn on what appears at first as a flight of fancy. And our spirits soar.

Perhaps we should set you aright. The lakes in Canada's north, like the one pictured here, are in fact water, and not a piece of misplaced sky.

Yes, the sun does hang around for weeks on end—in high season.

No, it's not spilt red, yellow and orange paint, but rather poppies, azaleas and lichen blooms.

The rush of falling water, the ethereal clouds draped halfway up a granite wall, the trophy lake trout you just released—all real, all natural, all right in front of you.

Lunch, 2nd day, still touring the 'back of our guide's hand.' Some hand! But feel we're representing the 'over the hill' club commendably.

The mountains here wear the forest like a favourite old sweater—though slightly overdressed for 80° weather. All in all, comfortably sprawling.

And don't be surprised if, in this land few have seen, you bump into someone you may have lost touch with. Yourself.

It's one of those ineffable feelings you get when you happen upon a herd of reindeer as interested in you as you are in them. (You'll be pleased to note that great stretches of this land are protected by parks that also put the lifelong residents at ease.)

Pic of the day? Zoom lens on eagle circling in search of a thermal.

Of course, roadside lodges, fly-in and outpost camps go without saying. But our first-class resorts with hot tubs, saunas and second helpings may be more of your scene.

Nobody up but the moon. Sitting on the roof of the world—dazed—a million stars in front of my eyes.

unnatural about this picture.

Oh, and the shimmer of purple and green and pink in the night sky? That's the aurora borealis. Native lore will tell you they're spiritwalkers. And it really is quite a charge. (But comes free, nightly.)

Still not convinced? We're not surprised. So let us leave by telling you what may be hard to believe is easy to see, wherever your imagination may take you.

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By Brock Brower

Why don't we pronounce the *t* in 'mortgage'?

The word has a deadly ring to it. Yet borrowing in fear of forfeit made us a nation of homeowners

"Behind the Crabgrass Frontier stood the U.S. Government, saying: 'Uncle Sam Wants You to Buy a Split-Level in the Suburbs.' "

Illustrations by Margaret Scott

Thirty-five million American families have a mortgage. Next to wills, mortgages are probably the single most gossiped-about instrument of financial obligation. So why don't we ever pronounce the *t*?

If we did, we might be reminded of the sobering roots of the word "mortgage," literally, a "dead pledge," as Dr. Samuel Johnson defined it in his famous dictionary. *Mort* (dead) plus *gage* (pledge). That would fit the worry we have about whether we will live to pay off the damn thing.

In medieval times mortgages were complex propositions involving such questions as whether the borrower or the lender was entitled to the rents and profits on the property, and shadowed by the fact that the church regarded charging interest a sin.

When the profits went to the lender, property rights were said to be "dead" to the borrower until the due date. Worse yet, if he failed to settle up on the due date, he lost everything, or as English jurist Sir Edward Coke put it in 1628, if a mortgagor failed to pay, "then the Land which is put in pledge . . . is taken from him for ever, and so dead to him."

This drop-dead deal was gradually deemed too harsh, and today's mortgages are considerably less dire. Nowadays, if you walk away from your pledge to pay, your home can still be seized and auctioned off. But after your debt to the bank is satisfied, you receive whatever sum remains—if the county or city hasn't taken it for back taxes you may owe. Still, that ancient term—"mortgage"—describes the basic pledge that lets a person's good word

"Fannie Mae was set up to help George Bailey and other lenders by pooling savings for easy transfer of mortgage money around the country."

(now amounting to a credit rating), backed by a piece of property, bring self and family in out of the rain.

Such mortgages built America's suburbia, and made this one of the few countries in the world where, to buy a home, all you had to have was a little set aside and a steady job. The promise to pay monthly—signed by more than 60 million heads of household—stands behind a modern miracle of American housing. That miracle is the sum total of government-encouraged home mortgages which, starting about 60 years ago, began pulling us out of the Great Depression.

One-third of the nation was then not only "ill-clad and ill-nourished," but "ill-housed," as President Franklin D. Roosevelt said. At one point, foreclosures reached the astounding rate of a thousand a day, and new home construction had dropped by 95 percent. Gauging the economic plight, Roosevelt and, grudgingly, the banks joined to create the greatest program of government-backed-and-insured home mortgages in history. And most of it is still with us today.

By that time, of course, home finance had a long history in the United States. Home mortgages were drawn up well before the Civil War by the new home savings and loan associations, created for reliable workers who were just moving up that first notch into the middle class. These associations became popular about the same time that Friedrich Engels, as a good proto-Marxist, was arguing against home ownership for workers. "Give them their own houses, chain them once again to the soil," he wrote in *The Housing Question* in 1872, "and you break their power of resistance to the wage cutting of the factory owners."

Like many Marxist judgments, that one proved totally cockeyed. Soon people who could scrape together a down payment—back then, one-third to one-half of the purchase price—were buying cheap housing out around the teeming cities. This wave of home buying, slow but steady, kept on, right up until the Depression. Then, after World War II, returning G.I.'s, with more than a little help from the government, kicked off the biggest housing boom in the history of the world—and on the easiest terms ever.

Long-term, low-interest and low-to-no-down-payment: the best deal done by the New Deal now extended to the vets under the G.I. Bill. So good a deal that half a century of home-finance folklore has since grown up around the family mortgage—the most beloved being Frank Capra's now ubiquitous film *It's a Wonderful Life* (1946), with Jimmy Stewart as George Bailey, head of Bailey Bros. Building & Loan, a precursor of today's ill-fated savings and loans.

Until rocketing interest rates, out-of-sight prices and the recent S&L scandals combined to change the financial landscape, building and loan companies generally represented the abiding hope for a roof over Everyman's head. Now, sadly, a whole generation—mostly baby boomers who grew up inside the four walls provided by that housing miracle—have been left wondering when or if they will ever be able to afford a place to live.

Tough economic times have always brought fear of a burdensome mortgage. A cut in salary—and there you are, in too deep, over your head. The

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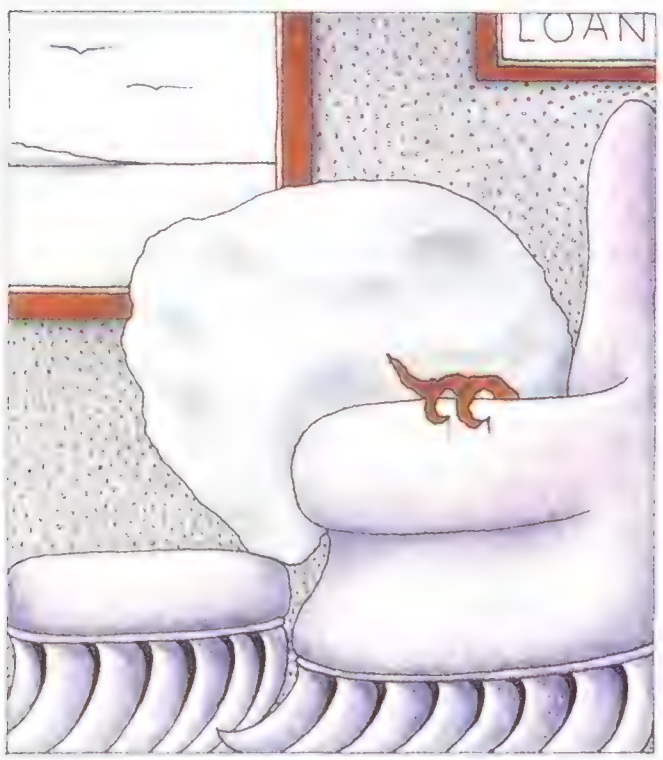
myth featured hard-pressed householders threatened with loss of their property to stonehearted creditors. It was the stuff of early melodrama, the villain snarling at the poor widow on Christmas Eve. Evictions and repossessions ruinously followed.

In short, the mortgage sits like a stone upon the homeowner and his property. The first mortgages, in fact, *were* stones that literally did sit upon the land. In ancient Greece, mortgage stones, called *horoi*, bore rudely carved descriptions of tightfisted terms: usually one-sixth of a poor Attic farmer's crop payable annually to his Athenian banker. Such landowners were known as *hektemoroi*—literally, those paying one-sixth interest. When Solon came to power in 594 B.C., one of his major reforms was to destroy the horoi, freeing the land and giving clear title to the hektemoroi. Eventually, of course, people found a way to go right back into debt.

Such is the path from ruin to redemption and back again that the history of the mortgage follows. Early on, indebtedness and usury in this country faced strong Puritan prejudice. People got around it, to be sure. Even the Founding Fathers speculated heavily in Western lands. George Washington and thrifty Ben Franklin both prospered. But the prevailing ethic was that a man should stand free and clear of debt. For years, a good way to avoid debt and get a roof over your head was to move West into that great gridiron of 160-acre quarter sections created by the Homestead Act of 1862, an early government giveaway in which land could pretty much be had for the farming of it.



"The mortgage sits like a stone upon the homeowner and his property."

Predictably, the Westward land rush produced the now familiar boom-and-bust. Mortgage protests rose among farmers who lost their land in the Panic of 1873, and after. Like a ghostly scythe, foreclosure followed the great trek Westward. It cut down pioneer Richard Garland, father of writer Hamlin Garland, who had sung out, with the porch fiddles:

> Then o'er the hills in legions, boys,
> Fair freedom's star
> Points to the sunset regions, boys,
> Ha, ha, ha-ha!

The bitter laugh was on Richard, who, like many farmers, lost everything to the banks. Five times in 20 years, he westered with his family, finally failing on a shanty farm in the Dakota Territory. His son had already gone back East to become the chronicler of those desperate days.

In "Under the Lion's Paw," Hamlin Garland wrote the classic American short story about mortgaged farmland. Defeated by grasshoppers, a poor dirt farmer named Haskins slogs into Cedar County, Iowa, with his wife and three children in his prairie schooner, and meets Jim Butler, a local landowner who claims that mortgages are "just as good as the wheat."

Butler is deemed one of the "easiest" creditors in town, offering farmland to any comer. He lets Haskins have the abandoned Higley place for a $250 yearly rent. Haskins works wonders with the spread. A year later, Butler drops around to say he will now let Haskins stay on the place for double the rent, $500 yearly—"or take it on your own terms at fifty-five hundred, or—git out." When Haskins

"The richest crop [a field] can grow
Is a crop of houses in a row."

complains, Butler wonders what he's "kickin' about."

"I'm kickin' about payin' you twice f'r my own things—my own fences, my own kitchen, my own garden." Some $3,000 in improvements. Butler sneers. His terms are harsh: $1,000 down, 10 percent interest. Haskins feels himself "under the lion's paw." Suddenly he has a pitchfork in hand: "You'll never rob another man, damn ye!"

But then Haskins catches sight of "the sun-bright head of his baby girl" and lets the fateful fork fall to the ground. "Make out y'r deed an' morgige, an' git off'n my land, an' don't ye never cross my line agin; if y' do, I'll kill ye."

Still no *t* in "morgige," but death surely threatens here, much as it did in the Western populist politics of the 1890s. With economic despair turned murderous, farmers came to foreclosure sales armed, ready to stop any man from bidding for another man's property. The same speculative squeeze would catch the farmers again in the 1930s. And yet again in the early

Brock Brower, the author of a novel, The Late, Great Creature, *and many political essays, is at work on a book about the 1980s.*

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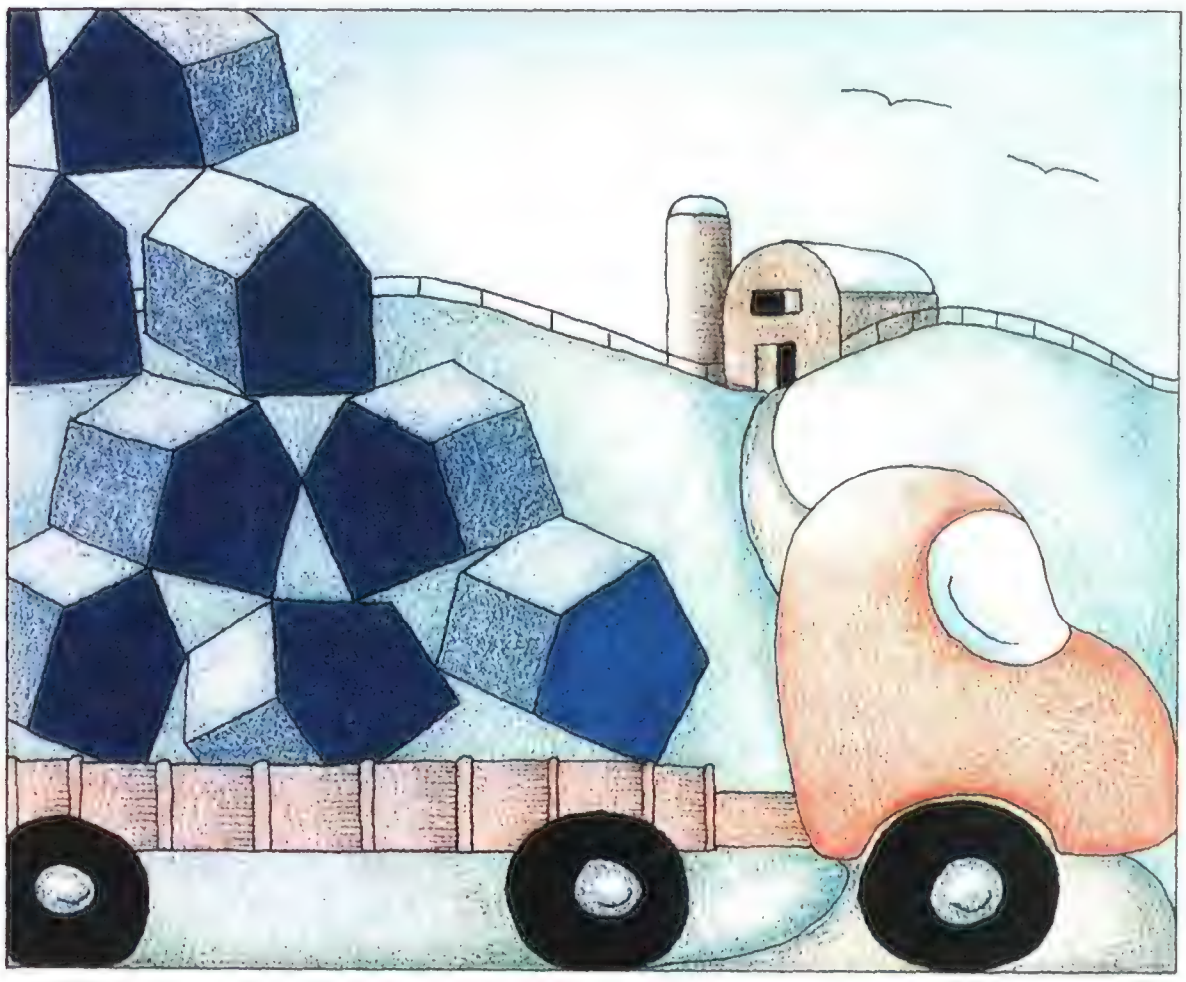
1980s, when some overextended farmers, mortgaged to the hilt for new farm equipment, lost everything.

That is the agrarian history of the mortgage. There is a parallel urban history that follows a much different track—specifically, the trolley tracks leading out of town. In the burgeoning cities of the late 1800s, what relieved immigrant population pressure was the electric streetcar—the first reliable, cheap public transport. Trolleys carried their humble passengers—soon to be modest-home buyers—into open territory that increased in area by "the square of the radius from the center of the city," as Kenneth T. Jackson calculates in his book *Crabgrass Frontier: The Suburbanization of the United States.* Developers (who also owned the trolleys) charged only a nickel for a ride as far as anybody—*clang! clang!*—wished to travel. At the end of the line, lots were plentiful and affordable.

Two other innovations had also been propelling a homeowners' rush to the outskirts of town. One was the old, faithful building and loan association offering home buyers the first "long credit and low terms." "Long" was six years, "low" was 6 percent. Borrowers were mostly families of moderate means, building balloon-frame dwellings for $1,000 to $4,500, often with their own hands.

The other was a structural change: the balloon-frame house itself. It supported its roof—and created its stability—not on solid brick or stone walls, but on 2-inch-by-4-inch studs set 16 inches apart. Before stud framing, house beams were locked together with complicated mortise-and-tenon joints that required a skilled, and expensive, carpenter. Basically, all you needed for a 2-by-4 balloon frame was a man with a hammer and some nails.

The only drawback to those early home-loan mortgages was that many never got paid off. Terms were five to ten years, with much of the debt due at termination. For several decades, up-and-down financial cycles balanced



"The Levitts could turn out cookie-cutter houses at a rate of 30 per day. And Bill Levitt usually threw in a free Bendix washer."

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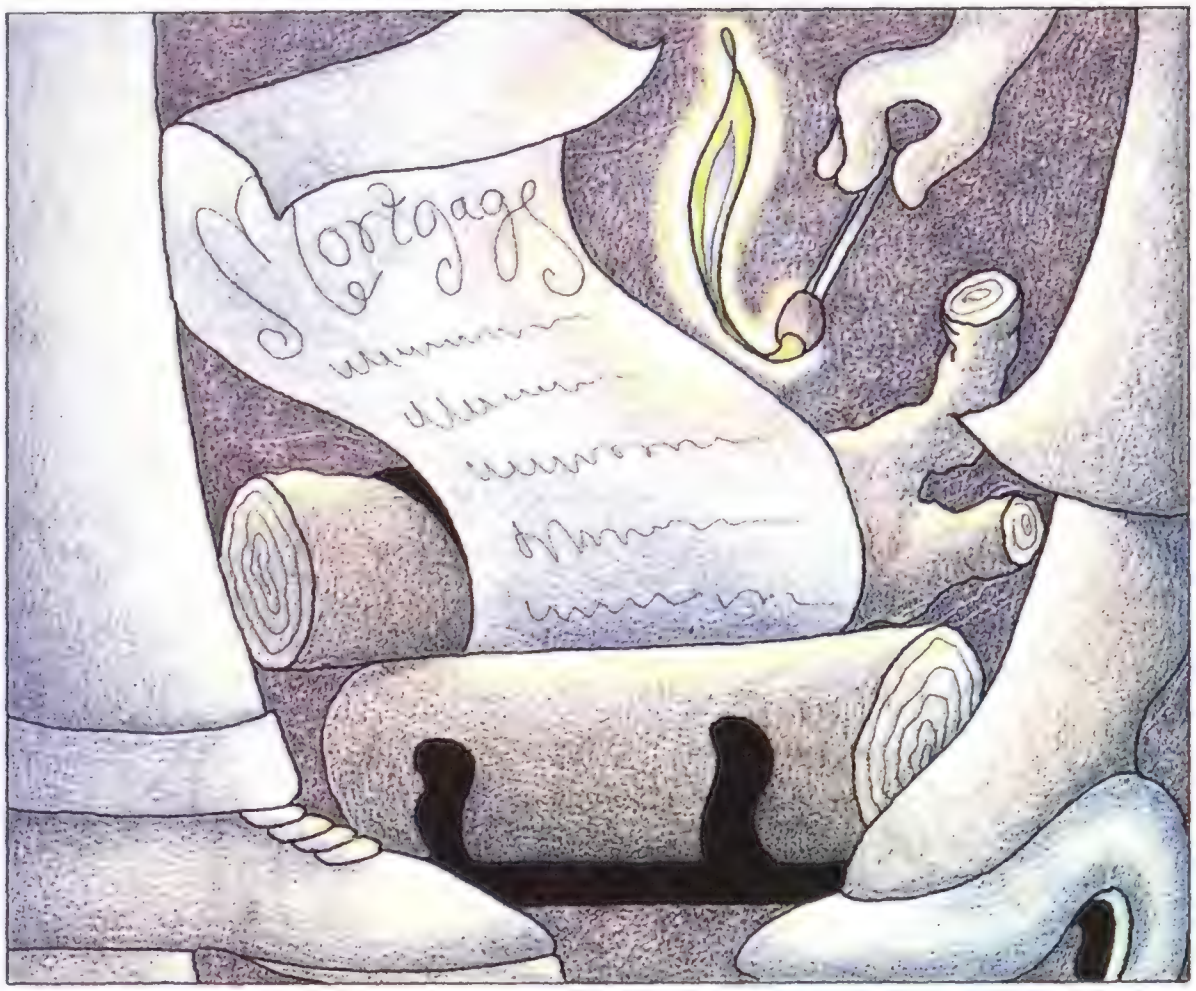

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well enough to avoid nationwide disaster. Then came the Great Depression. By 1933 half the mortgages in the country were technically in default, and the banks themselves teetered on collapse.

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"Do you know how long it takes a working man to save $5,000?" the outraged Bailey yells at Potter. "Is it too much to have [people] work and pay and live and die in a couple of decent rooms and a bath?"

That scene takes place before the Crash of 1929. By the early '30s, the man who, more than any other, agreed with Bailey in real life was President Herbert Hoover. People "never sing songs," he told an audience in the capital's Constitution Hall in 1931, "about a pile of rent receipts." In July 1932, to set up a credit reserve for mortgage lenders, Hoover signed the Federal Home Loan Bank Act. The only catch was, who in Depression America could qualify? In the first two years, out of 41,000 applications for direct loans under the act, only 3 were approved.

In Frank Capra's film, Jimmy Stewart handles the local panic by parceling out the $2,000 in cash he has in hand for his honeymoon with Donna Reed. But in June 1933, Hoover's successor, Franklin Roosevelt, came up with a broader, bolder solution. It was called the Home Owners Loan Corporation. Over the next two years, the HOLC lent $3 billion to back one million mortgages, helping save one-tenth of the family-owned homes in America. Altogether, 40 percent of eligible Americans applied to the HOLC. The New Deal had introduced a whole new concept into home mortgage finance: amortization.

Mort is back again, but providentially what gets killed here is the mortgage itself. To "amortize" means, lit-

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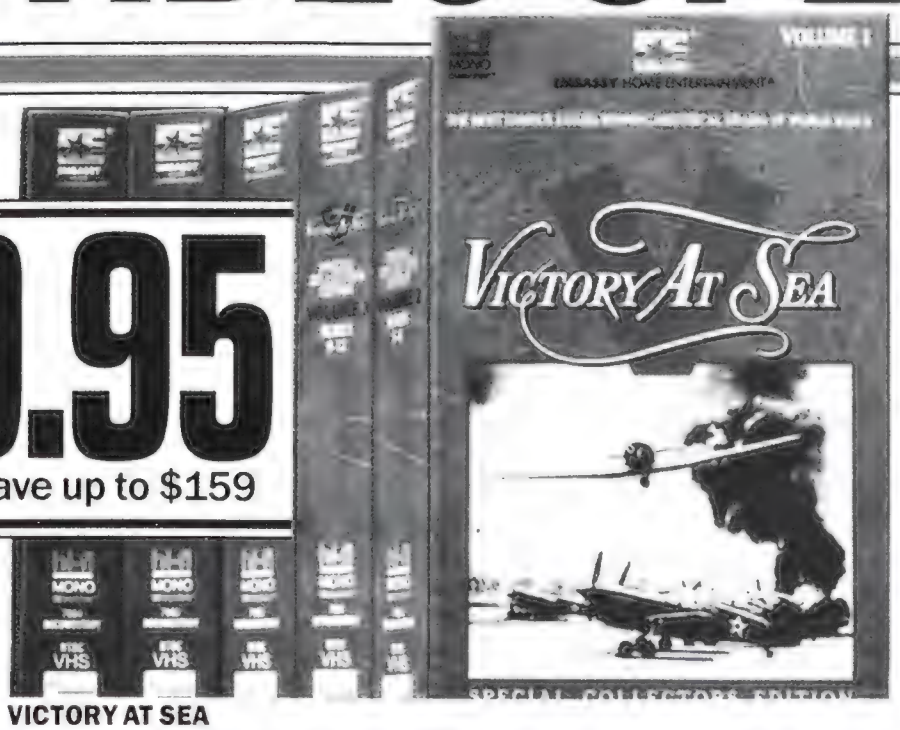

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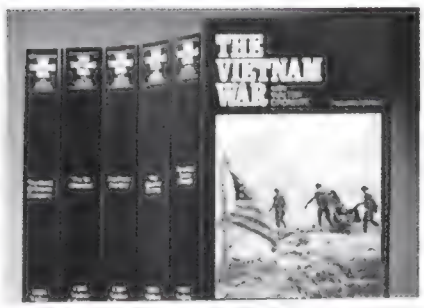

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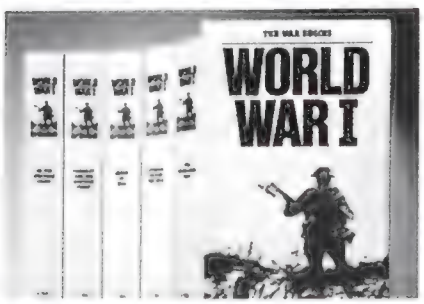

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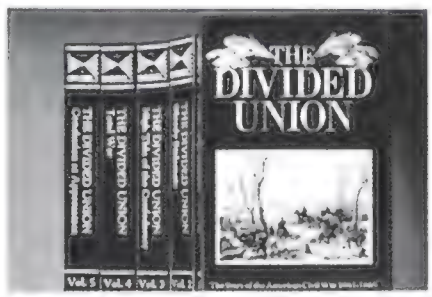

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erally, to bring to death. Now the debt is slowly reduced by payments spread over the life of the mortgage. In short, the mortgage most of us know and carry and meet every month was created to endure for 20 to 30 years. The hope was that some given day the family would actually retire the mortgage, then have a party, get drunk and joyfully burn the piece of paper. The HOLC and the amortized mortgage are what really saved Bailey Bros. Building & Loan and, in the process, revitalized the entire American construction industry.

Capra never quite says so, but George Bailey became a housing developer. Everyone knows the joyful scene, with the big banner that reads "Welcome to Bailey Park"—formerly a cemetery. George and his wife, Mary, are on hand to see the furniture moved into Mr. and Mrs. Martini's new home. Mary offers a loaf of bread ("That this house may never know hunger") and some salt ("That life may always have flavor!").

Dio mio! To buy in Bailey Park—and in thousands of other developed sites, as the country came out of the Depression—you didn't need 50 percent down. Ten percent of the purchase price was all. Another New Deal agency, the Federal Housing Administration, established in 1934, guaranteed 93 percent of Mr. and Mrs. Martini's mortgage. Even better, the existence of such FHA guarantees pushed interest rates way down to 4 percent or less. Further restoring confidence in the country's financial institutions, the New Deal created the Federal Savings and Loan Insurance Corporation (FSLIC) and the Federal Deposit Insurance Corporation (FDIC) to insure deposits in S&Ls and banks. With the federal government guaranteeing all, there was almost no risk.

The Great American Housing Boom was on. By 1937 there were 332,000 new housing starts. And the New Deal wasn't through yet. In 1938 the Roose-velt Administration created the Fed-

eral National Mortgage Association, now familiar as "Fannie Mae." Fannie Mae was set up to help George Bailey and other lenders by pooling savings for easy transfer of mortgage money around the country. By 1941 new housing starts had hit 619,000, and after the boys came home from World War II, building really accelerated. The need for housing was overwhelming, Kenneth Jackson writes. Six million families were having to double up in the homes of family and friends. Another half-million were living in Quonset huts or makeshift quarters. In Chicago, 250 of those trolley cars that once ran to the suburbs were actually sold as family homes. In 1944 Congress passed the Servicemen's Readjustment Act, which offered ex-G.I.'s—almost no questions asked—the same generous terms as the FHA: about 4 percent interest (administered through the Veterans' Administration) with up to 30 years to pay.

With new houses costing about $7,000, many families found it cheaper to buy than to rent. "We had been paying $50 rent," one homeowner moving from New York City to the suburbs reported, "and here we come up and live for $29 a month. That paid everything—taxes, principal, insurance on your mortgage, and interest."

George Bailey stood to make a mint. Case in point: the 4,000 acres of potato fields on Long Island that became Levittown. Originally called Island Trees, the development—17,400 houses and 82,000 residents—was renamed for its builders, Abraham Levitt and his sons, William and Alfred. By 1946, the Levitts could turn out cookie-cutter asphalt and gypsumboard houses at the rate of 30 per day, and arrange sales and mortgages at an even faster pace. No down payment, no closing costs. Hardly imaginable now. And Bill Levitt usually threw in a free Bendix washer.

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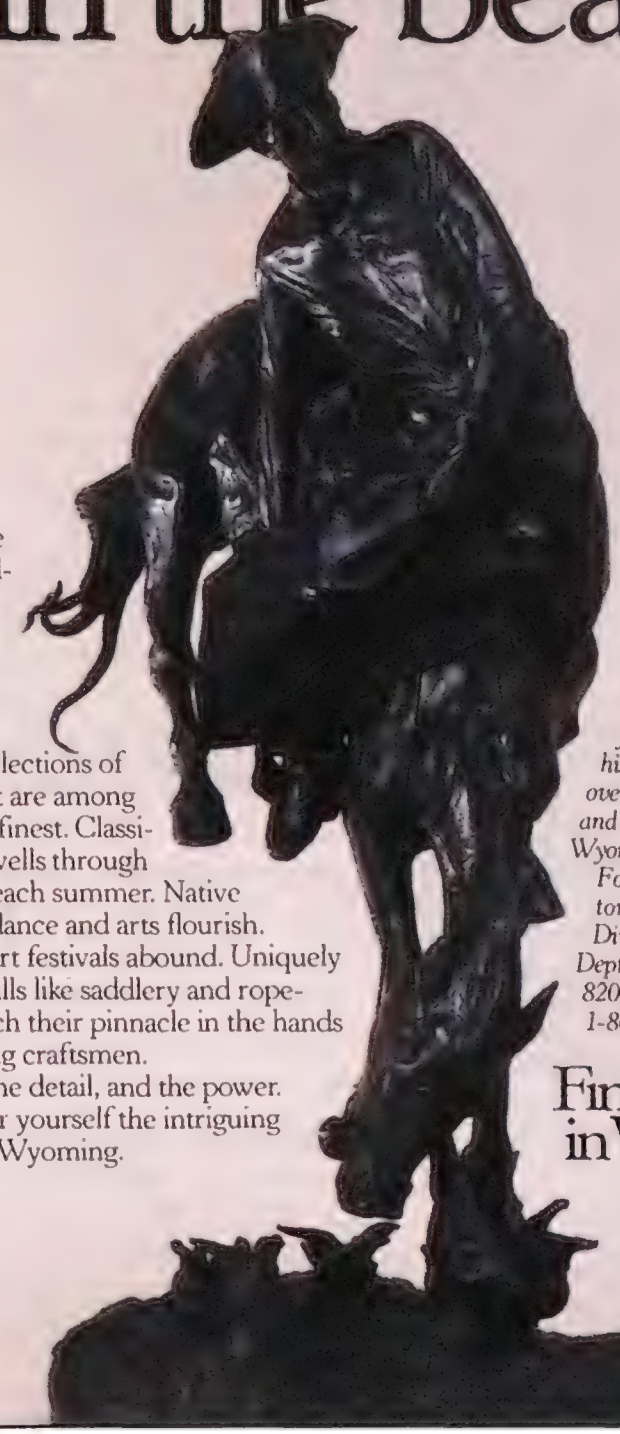

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But Levittown's dwellings were not row houses. They were (a magic word that helped create the massed suburbs) "detached." They had yards around them. They sat on a seventh of an acre, had grass—crabgrass, dandelions, clover, never mind, it was a lawn. Green. And if you didn't mow it, the Levitts came around and mowed it for you and then sent you a bill.

Behind all this homesteading—the "Crabgrass Frontier," Jackson calls it—stood, once again, the U.S. Government. It was as if that well-known patriotic poster were pointing to say, like a gimlet-eyed realtor: "Uncle Sam Wants You to Buy A Split-Level in the Suburbs." Federal tax laws offered deductions for "interest on indebtedness" and local property taxes. Concerted government policy seemed to have all new roads leading to suburbia.

In 1956, the Eisenhower Administration proposed to ribbon the country with 42,500 miles of concrete. About $30 billion in tax revenues was to be siphoned off from gas pumps into the Highway Trust Fund and spent solely on Interstates. That price tag has climbed to more than $100 billion. This legislation has produced the world's best road system, while dramatically contributing to the most rapid deterioration of any public transportation system in the Western world. So add the new car payment to any suburban mortgage.

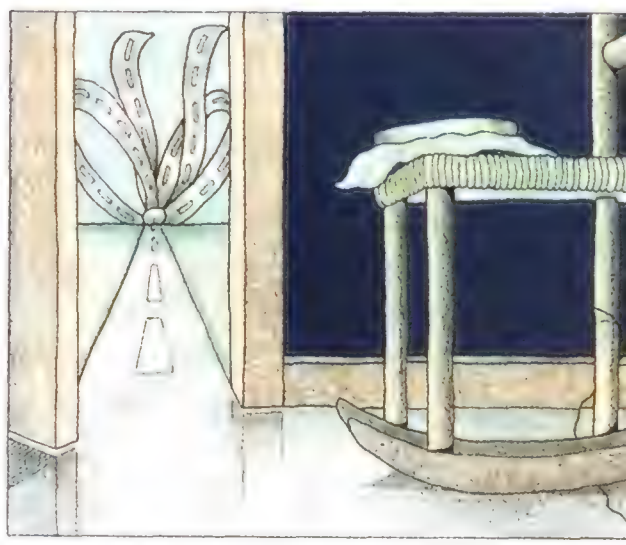
If the Puritan had eschewed debt, the 1950s' "Man in the Gray Flannel Suit" embraced it. A mortgage helped him beat inflation, lower his taxes, accumulate equity and establish a credit rating, and incidentally, house his wife and kids. "No man who owns his own home and lot can be a Communist," Bill Levitt philosophized in 1948. "He has too much to do."

So where did all this leave Bailey Bros. Building & Loan? The movie lands George back home on Christmas Eve, circa 1946, after his rescue from a suicide attempt over a surprise visit from the bank examiner. George dashes up the staircase, yanking that loose knob off the newel post again. Only this time he takes the knob in both hands, like an orb, and kisses it. God bless our humble home. He has saved Bedford Falls from becoming—think of it—Pottersville!

But these days we always wait for the sequel, don't we? The last few decades would have been sensational for George Bailey. All these new people, these out-of-towners—these Ozzies and Harriets, these Desis and Lucys—moving into 14 million new homes during the '50s. If George just showed up at the office to OK the mortgages—at 4 to 5 percent interest—Bailey Park was bound to outgrow Bedford Falls. During the '60s another 14 million homes went up, while interest rates held steady at about 6 percent. All George had to do was follow the S&Ls' well-known 3-6-3 rule: borrow at 3 percent, lend at 6 percent and be on the first tee by 3 o'clock.

In any realistic sequel, though, mean Mr. Potter would come to see George. It is around 1970. We can imagine him being wheeled in, but this time shaking, on the brink of ruin himself. And all George has to do is buy Potter out, bulldoze Potter's substandard housing and put up condominiums. Condos have been called "the greatest innovation of the decade." After all, a condo owner gets the mortgage tax deduction, equity and a bit of lawn—while somebody else does the yard work.

By the 1970s, the biggest building



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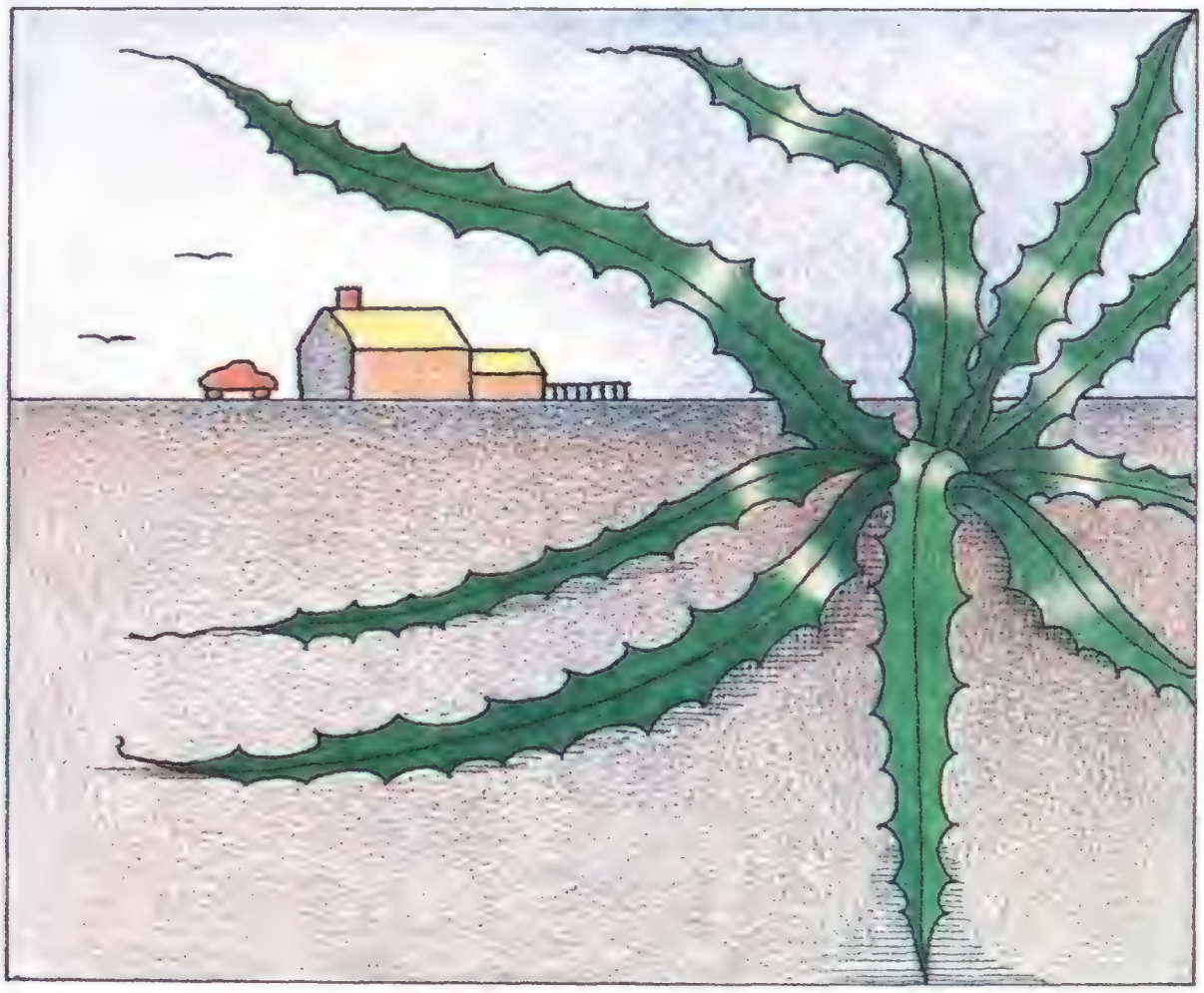

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boom ever had hit the country, with 18 million new homes to accommodate the baby boomers, who needed space now that they had kids of their own. Senior citizens were living alone. Divorces created new households. The nation's housing stock increased 28 percent, but still not enough to meet the growing demand. By the end of the decade, first-time home buyers willingly paid 9, 10, even 11 percent for a roof over their heads—anything to get in out of the rain and into some equity. Even old barns like George's delapidated manse doubled in value.

As interest rates skyrocketed, depositors passed up the S&Ls and put their money in money markets, mutual funds and other newfangled investments with higher yields. George and his fellow S&L officers, caught in a squeeze, looked to the government for help. In 1980 Congress lifted the interest cap on S&Ls, so Baily Bros. and others could compete by paying higher interest. It also raised the FSLIC and FDIC insurance to $100,000. But there remained a snag—those old 30-year mortgages were still bringing in only 6 to 8 percent. What they needed, George and his friends reasoned, was to get in on the more profitable (albeit riskier) ventures; home loans were not enough.

In desperation, George joined the S&L industry outcry for relief through further deregulation. Congress responded generously: S&Ls could offer whatever interest they wished and were free to invest in most ventures that struck their fancy.

In *It's a Wonderful Life II*, on one afternoon circa 1986, the board of Bailey Bros. Building & Loan meets, the same way as back in Capra's film, only with several new members, including, say, an Atlanta banker who is into mergers, and another money man, perhaps a real estate developer from Los Angeles. They start talking to George about looking into a big tract outside Phoenix, Arizona, and getting in on a bond issue from a man named Michael Milken.

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These are very big investments, but George is told that everything can be backed by selling "brokered deposit" blocks—i.e., blocks of $100,000 in high-interest savings. These deposits are all safely insured under that good old New Deal institution the FSLIC, designed to protect people's savings from exactly the kind of run visited on Bailey Bros. in the original film.

When George says, "Now hold on just a minute"—exactly like Jimmy Stewart—these folks will say he isn't a businessman. And George, remembering that bank examiner who is due to come around on Christmas Yet to Come, will look heavenward for his guardian angel and mutter, "This is a wonderful life?"

That is how the New Deal, the developers, the banks, the S&Ls and the Great Republic—with $2.3 trillion in mortgage money, secured by $4.7 trillion worth of housing and the U.S. Government—rolled America over into suburbia. The peak year (or saturation point?) came in 1980, when 65.6 percent of American householders owned their own homes. The rest of the world had seen nothing like it.

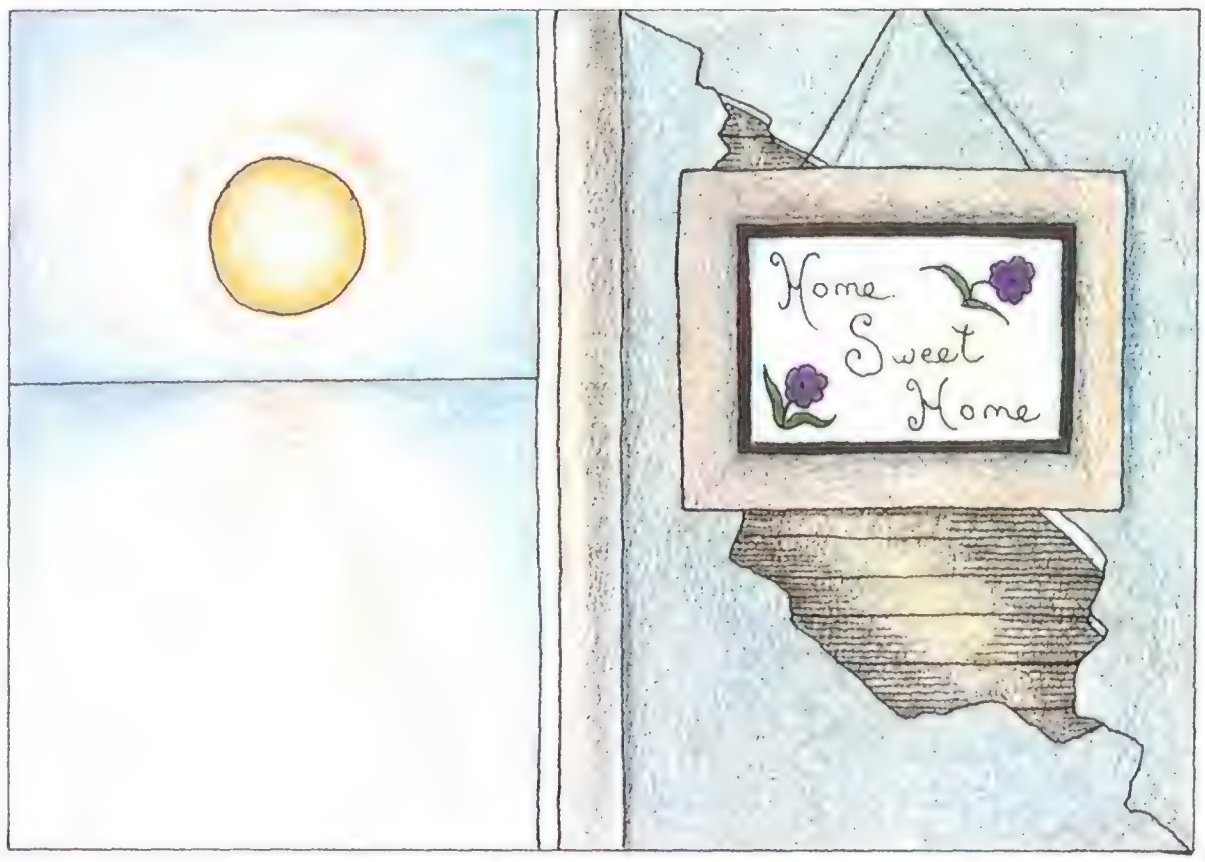
But houses had often been bought at inflated prices, at astronomical rates of interest. For many people, homeownership was, to put it mildly, "cost burdened," with mortgage payments taking more than 40 percent of some households' income. Over the past decade, first-time home buyers—ages 25 to 34—have dropped from 53 percent to 45 percent. The old 30-year, 6-percent mortgage is like a rare old piece of parchment. Into this breach came that 1930s institution Fannie Mae, which had gone private in 1968 and was now a financial giantess. To help make home loans affordable, Fannie Mae and other institutions began to offer customized financing. Mortgages now come in many flavors. Among them: the adjustable-rate mortgage (ARM), whose interest rate fluctuates according to the going rate; and the balloon mortgage, which lets you pay a little for a little while and then demands the full amount (useful for those with immediate expectations of inheriting money or making a financial killing). Then there is the biweekly mortgage, with its faster equity buildup—if you can stand paying the mortgage every time you get your paycheck.

That was only the start. People began making communal, cooperative mortgage deals. With everybody sharing *kinder,* kitchen and karma, folks were back to doubling up again. As an alternative, you and your significant other, rather than move in with her family—as in TV's *All in the Family*—might explore ways of buying the top half of her family's house.

And now comes the whirlwind of fiscal woes that have blasted public confidence in the very New Deal & After institutions that underwrote the dream: government-backed (i.e., taxpayer-paid-for) loans and investment guarantees. The federal deficit and inflation provided the rising action. Mismanagement at the FHA, that remarkable New Deal dream maker, and scandals at the Department of Housing and Urban Development were bit players. The tragic climax came with the $500 billion S&L debacle. In the wake of that, even the FSLIC, the trusted insurer of home savings from Roosevelt's happier days, is defunct, bankrupted by the monumental losses; Congress has set up two new agencies to handle its debts. The epidemic of greed and mismanagement and speculation that seized the thrift industry wiped out more than 500 (out of 3,000) savings and loans. Will Bailey Bros. Building & Loan be among them?

We may not really know for a decade. It will take that long to clean up the $500 billion in losses and learn the true score. Perhaps the real sequel to *It's a Wonderful Life* was a haunting film that loosed its furies in 1982, Steven Spielberg's *Poltergeist,* all about another real estate development that's built, just like Bailey Park, where a cemetery used to be. Eventually the dead rise up to claim title to this heavily mortgaged tract. "They're here!" child star Heather O'Rourke coos, chillingly. An almost prophetic sign of what we may expect from our household furies gone on rampage. "They're back."

"*Mort* (dead) plus *gage* (pledge). That would fit the worry we have about whether we will live to pay off the damn thing."



"Do not fear my children . . . My People and I will watch over you . . . Soon you will see me at dawn . . . It is the dawn of the world. . . ."

—Dot'soh, from a Navajo Legend *

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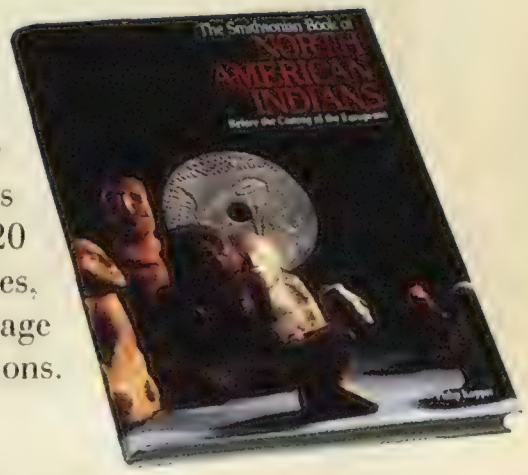

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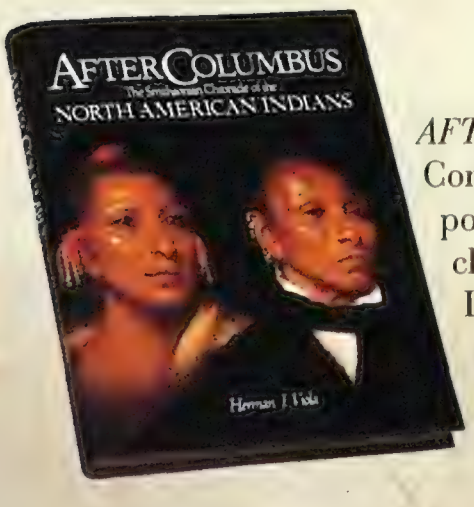

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* As translated by Hansen Ashley, a member of the Navajo Tribe

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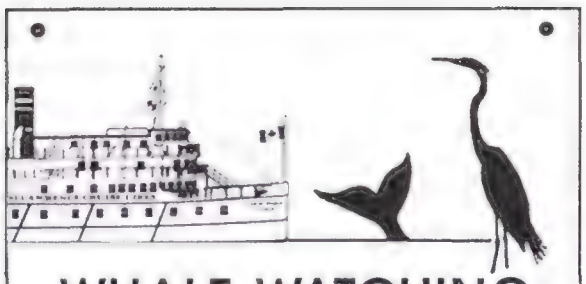

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Book reviews

Through a Window: My Thirty Years with the Chimpanzees of Gombe
Jane Goodall
Houghton Mifflin, $21.95

When Flint's mother dies, the youngster falls into a deep depression, seldom leaving the spot where her body had lain, until he himself dies. Huge Jomeo, frightened into passivity early in life, nevertheless becomes a fierce protector of his little brother when both are orphaned. Under Fifi's devoted mothering, young Figan grows up to win a long and cunning battle for community leadership. Dying Madam Bee is lovingly attended by her daughter.

All these caring individuals are chimpanzees. For 30 years Jane Goodall has been opening a window onto their fascinating world. And in this rich book, hundreds of observations add up to something far more than intriguing anecdotes—they form the life history of a complex community.

Our view of our closest evolutionary neighbors has long been clouded by our bias and ignorance, "misted over by the breath of our finite humanity." Jane Goodall's goal, as she writes eloquently and modestly here, has been to "clear a tiny peephole," sharing insights about parts of the whole. It is, she says, "like trying to comprehend the panorama of a desert . . . through a rolled-up newspaper."

Make that a wonderland, viewed through a crystal-clear, wide-angle lens. *Through a Window* does more than update *In the Shadow of Man*, Goodall's lively account of her first ten years of fieldwork at Gombe Stream in Tanzania. Goodall's latest book also complements her huge and highly praised new scien-

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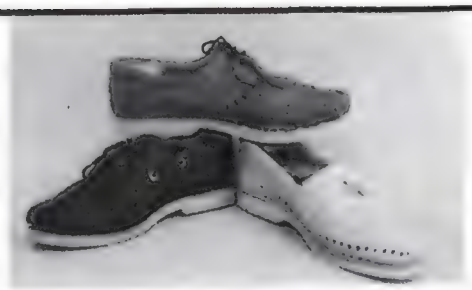

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tific work, *The Chimpanzees of Gombe*, reshaping that mountain of data into a series of profiles of relationships that form the core of chimpanzee society: the enduring bond between mother and child, and the never-ending struggle among males for leadership and access to fertile females, a battle of complex political alliances.

Much has changed in Goodall's—and our—estimation of chimpanzees since she wrote *In the Shadow of Man*. We have all learned that this wonderland is no Eden. As in our world, warfare is a brutal staple of chimp society, generosity rare outside the close-knit community. And some behaviors by Gombe's chimpanzees go far beyond everyday human cruelty. So Gilka's baby is stolen, killed and eaten by Passion. And routinely, chimpanzees display a selfish cunning in love as well as war. "Even during the most seemingly idyllic of consortships . . . the seeds of unfaithfulness are present," Goodall writes.

The realization that chimpanzees could be just as brutal as humankind was for Goodall a bitter blow. But it hasn't caused her to flinch from observing or caring, to her immense credit as a scientist and an individual.

There have been many other great sadnesses in Goodall's life. Those briefly but compellingly related here include the death of her second husband and the kidnapping of some of her students by Zairian rebels. And because chimpanzee society could be understood only by an uncommon method of decades-long accumulation of observations, the scientific respect due Goodall and her work was long in coming.

But Goodall's chief concern here, as always, is chimpanzee life. Playful, devious, immensely varied in temperament and experience—chimpanzees are alive in these pages. And when they die, from polio epidemics, battles or simply old age, we feel their pain and Goodall's. As she has done often before, the scientist recalls sitting beneath a tree silently sharing a chimpanzee's last hours. "There was a distant pant-hoot far across the valley, but Melissa was silent. Never again would I hear her distinctive hoarse call. Never again would I wander with her from one patch of food to the next, waiting, at one with the life of the forest, as she rested or groomed with one of her offspring. The stars were suddenly blurred and I wept for the passing of an old friend."

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This affection never blurs her scientific focus. Her capacity to be at once sensitive and perceptive is key to Goodall's unique talent and task.

Nasty, brutish and short as chimpanzee life can be, Goodall shows it to be full of loving, inventive individuals. We, and not chimpanzees, she concludes, are the only animals capable of *deliberate* cruelty. Yet, so too are we distinguished by our humanity, a quality Goodall possesses in abundance. When she turns, in closing, to our abuse of chimpanzees and their habitat in the wild and in the laboratory, hers is a clarion call. By protecting her friends, our close cousins, we preserve the best in ourselves.

Don Lessem
Massachusetts naturalist

The Runaway Bride: Hollywood Romantic Comedy of the 1930s
Elizabeth Kendall
Alfred A. Knopf, $24.95

Whatever the reality in modern American life—war, peace, boom, bust—there's always been a Hollywood to offer us a new reality when we tired of the current one. Over the years we've trooped into movie theaters by the billions, expectations as palpable as ticket stubs. Hollywood has been a consistent dream factory in our recent history; nothing is more endemic to America than the celluloid products of Tinseltown.

Elizabeth Kendall is one of our most astute film and dance historians. Following up her wonderfully entertaining *Where She Danced*, Kendall has zeroed in this time on one particular genre of the film industry—the romantic comedy of the 1930s. In studies so immediate and insightful they take on the luster of the films themselves, she traces the evolution of this bright new offering and how it played against the darker social upheaval that underlay the decade.

Let's take a flashback here. Like a prophetic herald, the New York stock market crashed two months before the decade began, ushering in the Great Depression. In Hollywood, the silents were gone—movie audiences had finally tired of Mack Sennett silliness and Keystone Kop pratfalls. The talkies were here to stay, but the studios—glamorous, dictatorial fiefdoms featuring self-sufficient production units and a stable of stars contracted to weekly salaries—were struggling to add a new entree to their familiar menu of Westerns, gangster epics, musicals and weepers.

Most of us have stumbled onto one of these weepers on late-night television. They are formula incarnate. The hero is wealthy and respectable, the heroine poor and weak. In droopy hats and collar-up trench coats they meet under misty streetlights to play out their forbidden love, and when the woman commits the inevitable moral blunder and spends the rest of the movie sobbing into her handkerchief, and facing a life of impaired dignity and circumstance, we know the script has been faithfully adhered to.

Sitting in the darkened theater we pitied those heroines, condescended to them, expiated our own lost dreams and quickly grew bored. Even the jovial critic Robert Benchley complained that these clammy melodramas had grown "as tiresome as trying to save the Old Mortgage." Worried studio executives

swore at one another and chomped their cigars. What to do?

Introduce the romantic comedy, of course! What could be simpler?

They did; by 1933 the weeper was in decline, along with many of its stars—Dietrich, Garbo, Kay Francis, Constance Bennett et al. The new genre, Kendall tells us, was first worked out by Frank Capra in the 1934 hit *It Happened One Night*, starring Claudette Colbert and Clark Gable. Why was the movie so revolutionary? Because of the heroine and her new position within the romance. Unlike the weeper, the romantic comedy featured a strong, confident female in control, or taking control, of her life.

Major studios such as Paramount and MGM turned out clever comedies, but it was the smaller, struggling studios—RKO and Columbia—that were responsible for the real breakthrough in these soufflélike Depression parables. And the public loved them. Time and again, Hard Times were glossed over by handsome silver-screen couples falling in love, living happily ever after. Obviously, it's what we needed. In 1936 alone, 88 million of us bought tickets—every week.

Kendall views these comedies as "collaborations" between female star and director, then fills in the details. It's fun to peer over the director's shoulder as he makes his movie, frequently improvising, fitting plot to the persona of the actress he's working with and, often, making famous. After Colbert's trendsetter, Capra directed Jean Arthur in *Mr. Deeds Goes to Town*. Gregory La Cava pushed Carole Lombard to fame in *My Man Godfrey*, then won the daily double by pairing Ginger Rogers and Katharine Hepburn in the scintillating *Stage Door* (1937).

In *Swing Time* (1936), directed by George Stevens, Rogers had starred with Fred Astaire; that time the romantic comedy had taps on its shoes. And not once did the basic format vary in all the films these two hoofers gave us—antagonists to begin with, they dance together and fall in love, encounter misunderstandings, yet survive all to dance again. Sounds corny now, but it was fresh then. Light in a dark time.

Late in the decade the romantic comedy began to change. Humor about marriage problems (Irene Dunne in Leo McCarey's 1937 *The Awful Truth*) gradually began replacing humor about class crossover. By 1941 Preston Sturges' *The Lady Eve*, with Barbara Stanwyck, was a late tribute to Capra's genre.

Many of the movies shamelessly reprised earlier ones. The comic structure of Capra's *It Happened One Night* was all too recognizable in Sturges' *Palm Beach Story*, which also starred Colbert. The interior dynamic of the industry-saving romantic comedy had come full circle; peak was decline. And war was looming. The Depression zeitgeist was history.

Not only has author Kendall re-created the Hollywood of the '30s without the customary salacious fodder, she has placed us in a cool dark movie theater, eating popcorn Depression-style, kernel by kernel. We went to the movies those days to see ourselves, and we get the chance again in this fascinating book. There's a special added attraction this time, however, a half-century's worth of legend, myth and memory.

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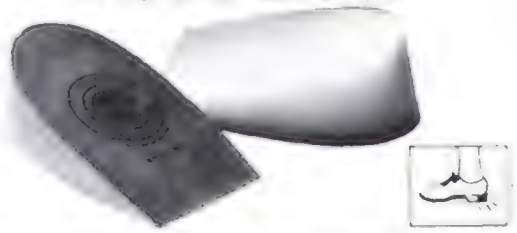

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Additional reading

Smithsonian horizons (p. 12)

Before European Hegemony: The World System A.D. 1250-1350 by Janet L. Abu-Lughod, Oxford University Press, 1989

Trade and Civilisation in the Indian Ocean: An Economic History from the Rise of Islam to 1750 by K. N. Chandhur, Cambridge University Press, 1985

Cross-Cultural Trade in World History by Philip D. Curtin, Cambridge University Press, 1984

Sheepherders (p. 36)

"Tierra Amarilla: Folks live for the land in rural mountain village" by Camille Flores, *New Mexico*, February 1991

La Tierra Amarilla: The People of the Chama Valley, edited by Enselmo F. Arellano, Chama Valley Schools (Tierra Amarilla, New Mexico), 1978

Rural Environmental Planning for Sustainable Communities by Frederic O. Sargent, Paul Lusk, José Rivera and Maria Varela, Island Press (Washington, D.C.) (in press)

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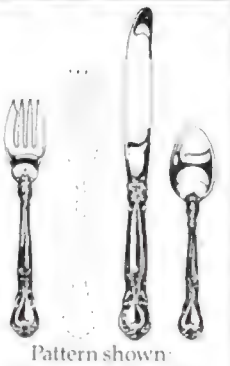

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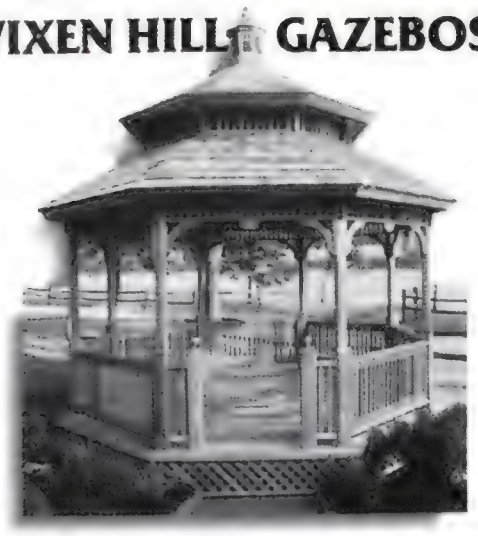

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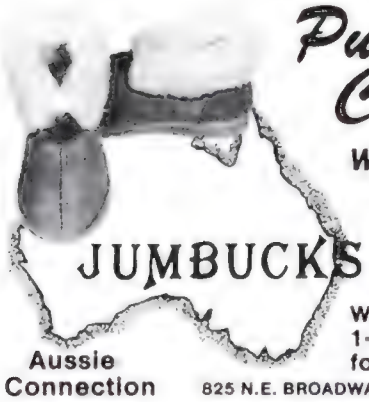

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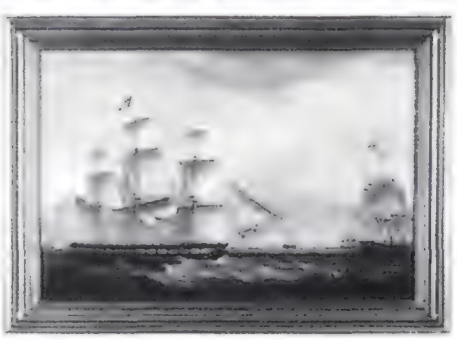

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The American Store Window by Leonard S. Marcus, Whitney Library of Design (New York), 1978
Dolls and Puppets by Max Von Boehn (revised edition), translated by Josephine Nicoll, Charles T. Branford Company (Boston), 1956

Magellan (p. 84)
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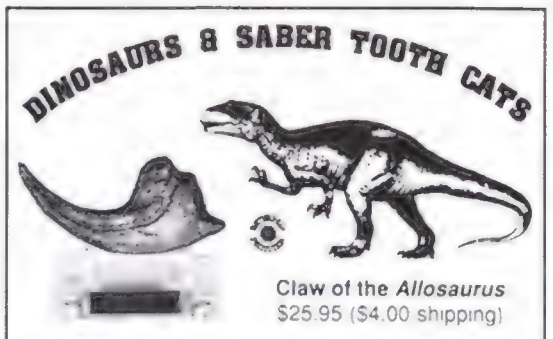

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Freer remains closed

The Freer Gallery of Art is closed until late 1992.

Washington Craft Show

The ninth annual Washington Craft Show, sponsored by the Women's Committee of the Smithsonian Associates, will be held April 18-21, in the Departmental Auditorium, 1301 Constitution Avenue, N.W., across from the National Museum of American History. See *Highlights continued*, page 158. There will be an admission charge. For information, call (202) 357-2700.

In conjunction with the Craft Show, the James Renwick Alliance will hold its annual spring symposium April 20-21. For details, call (301) 229-2148.

Special April exhibits and events

National Museum of American Art
The West as America: Reinterpreting Images of the Frontier, 1820-1920 (through July 7) A critical look at the role of imagery in persuading people to move West.
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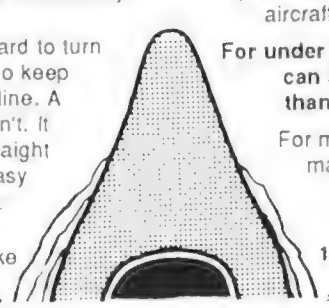

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iature in America (through June 16) Two hundred works from 1750 to 1850.

National Portrait Gallery
Magical Mixtures: Marisol Portrait Sculpture (April 5-August 11) The first national exhibition devoted solely to the artist's portrait sculpture.
Annie Leibovitz Photographs 1970-1990 (April 19-August 11) Exhibit features portraits of figures important in American popular culture.

Hirshhorn Museum & Sculpture Garden
Sigmar Polke (through May 5) Retrospective honoring the influential and eccentric German artist, organized by the San Francisco Museum of Modern Art.
Ann Hamilton/Kathryn Clark WORKS (through June 23) Site-specific wax installation for museum's windows.

Arts and Industries Building Experimental Gallery
Brazil/New York Oxygen Share (April 17-June 30) Installation by Brazilian artist Jonas dos Santos comments on the depletion of the Amazonian rain forest.
Casitas: An Urban Cultural Alternative (through June 30) Depicts *casitas*, a Caribbean architectural form.
Principles of Flight (through May 30) Hands-on interactive exhibit.

National Museum of Natural History
Beyond the Java Sea: Art of Indonesia's Outer Islands (April 19-July 14) More than 200 masterful works represent a survey and synthesis of the cultural life and thought of Indonesia's peoples.
Indonesian Village Worlds (April 19-July 17) A photographic exploration of Indonesia by anthropologist Eric Crystal.

National Museum of American History
Union Pacific: Building the First Transcontinental Railroad (April 1-June 30) Original prints from 1866 to 1869 by photographer Andrew Russell document the construction of this engineering feat.
Nusantara: Lands and Peoples of Indonesia (April 8-November 30) Rare books dating from the late 16th through 20th centuries.

National Air and Space Museum
Blue Planet (runs indefinitely) New Smithsonian Imax film features spectacular footage of Earth and its environment, as seen from space.
Commuting in the Modern Manner: The Grumman "Goose" Amphibian (runs indefinitely) A look back at the 1930s "limousine of the air."

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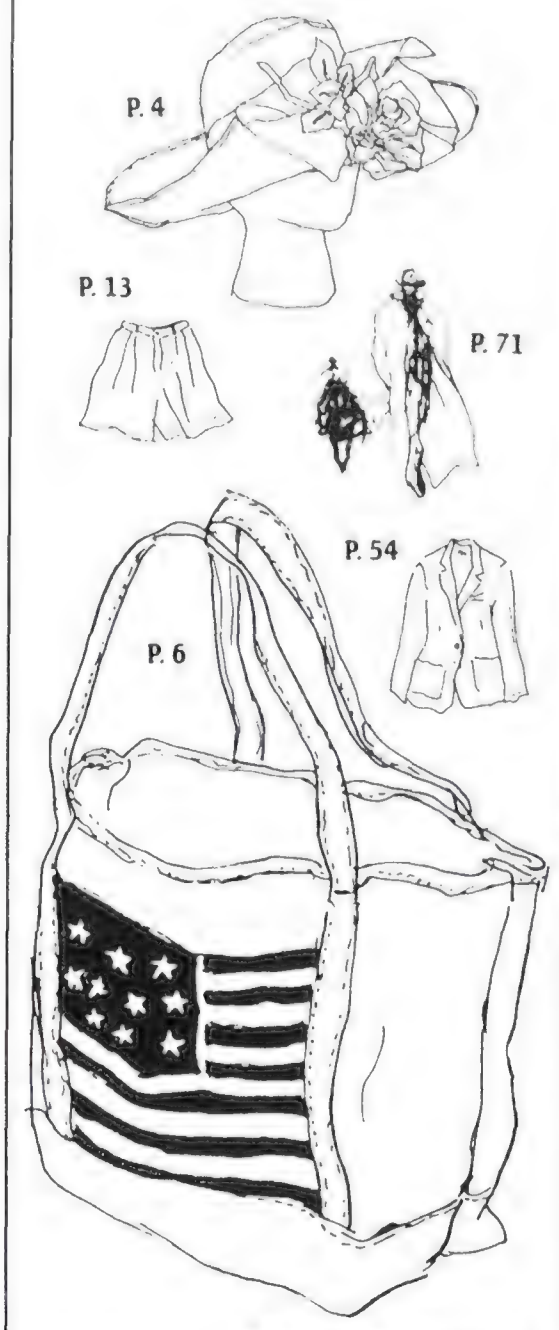

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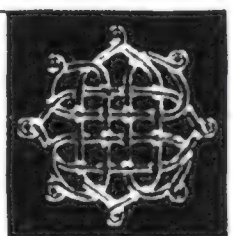

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Anacostia Museum
Gathered Visions: Selected Works by African-American Women Artists (through April 28) Paintings, drawings, fabric art, sculptures and prints by 15 Washington, D.C. area artists.

Cooper-Hewitt Museum (New York)
The Cooper-Hewitt Collections: A Design Resource (through summer 1992) Some 700 objects chronicle the history and collecting philosophy of one of the most important repositories of design.

Renwick Gallery
Lenore Tawney: A Retrospective (April 12-July 21) Survey of the work of the pioneer fiber-artist who freed textiles from the loom.

National Museum of African Art
African Reflections: Art from Northeastern Zaire (through January 12, 1992) The refined and delicate art of the peoples of northeastern Zaire.
Paramount Chiefs of Sierra Leone: Photographic Portraits by Vera Viditz-Ward (through September 2) Contemporary photographs from West Africa.

Arthur M. Sackler Gallery
The Arts of China (runs indefinitely) More than 200 objects, including sculptures and paintings, span 6,000 years.
Antoin Sevruguin: Photographs of Iran (through May 27) Stunning images of life in Iran, 1880s through 1920s.

Exhibition catalogs

Catalogs available currently include:
Magical Mixtures: Marisol Portrait Sculpture (paper, $24.95)
Beyond the Java Sea: Art of Indonesia's Outer Islands (paper, $29.95)
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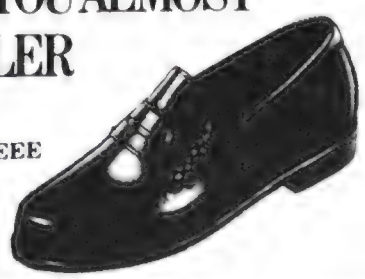

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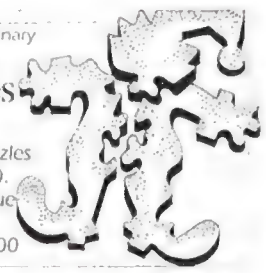

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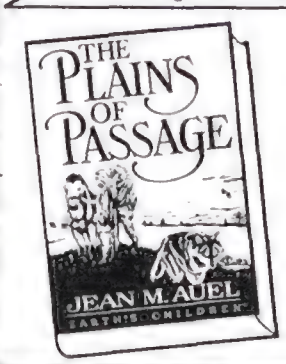

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Smithsonian's Marine Systems Laboratory and its contribution to Biosphere II. Program will air on the Discovery Channel Monday, April 1; it will be repeated April 5 and 6. Check local listings.

Folk Masters: This series of one-hour radio programs, featuring award-winning performers of traditional music recorded live, can be heard on public radio stations nationwide. Check local listings.

Smithsonian World: "From Information to Wisdom?" airs April 17 at 9 P.M. EST, examines the interaction between people and technology. Check local PBS listings.

Smithsonian National Associates

This month the Program will visit Anchorage and Juneau, Alaska; Oakton, Illinois, and Chicago's North Shore; and Denver and Pueblo, Colorado. Topics featured range from forensic anthropology to tropical rain forests.

For further information, write or call U.S. and International Events Program, 490 L'Enfant Plaza, S.W., Suite 4210, Washington, D.C. 20560; (202) 287-3210.

Resident Associate Program

To become a Resident Associate, or for fee and ticket information, call 357-3030. Here are some April events:

His Holiness the Dalai Lama "Altruism and World Affairs" (April 17; 7 P.M.) Talk by renowned Buddhist leader.

An Evening with W. Richard West, Jr.: The National Museum of the American Indian—Images of Indian Culture (April 9; 8 P.M.) The director discusses his museum's mandate as a "living" museum.

Saving London's Buried Past: New Techniques in Urban Archaeology (April 23; 8 P.M.) Lecture by John Schofield of the Museum of London.

Smithsonian Institution Traveling Exhibition Service

SITES organizes and circulates exhibitions to cities throughout the United States and abroad. To sponsor a show in your community, write SITES, Smithsonian, Washington, D.C. 20560. Here are some April exhibits:

Annapolis, Maryland (April 1-May 19) *Drawings by Utagawa Kuniyoshi*, St. John's College.

Dayton, Ohio (April 6-May 5) *A Day in the Warsaw Ghetto: A Birthday Trip in Hell*, Sinclair Community College.

Savannah, Georgia (April 27-June 9) *To Color America: Portraits by Winold Reiss*, King-Tisdell Cottage Foundation.

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Sponsored by the Women's Committee of the Smithsonian Associates, the 1991 Washington Craft Show will feature the work of 100 artists. Participants were selected from more than 1,200 applicants and judged on the basis of originality, craftsmanship and artistic conception. "What concerned us most was the quality of the workmanship and the freshness of the ideas," says Rick Wrigley, a Massachusetts furniture designer who was one of the three jurors. "This is an exciting show with extremely high-quality work." It promises also to be wonderfully diverse. Forms represented vary from the avant-garde to the classical, from the funky to the refined. Materials range from New Age to traditional. Many of the artists draw on the customs and imagery of ancient or exotic cultures; others refer to major movements in art history. Yet experimentation and playfulness abound.

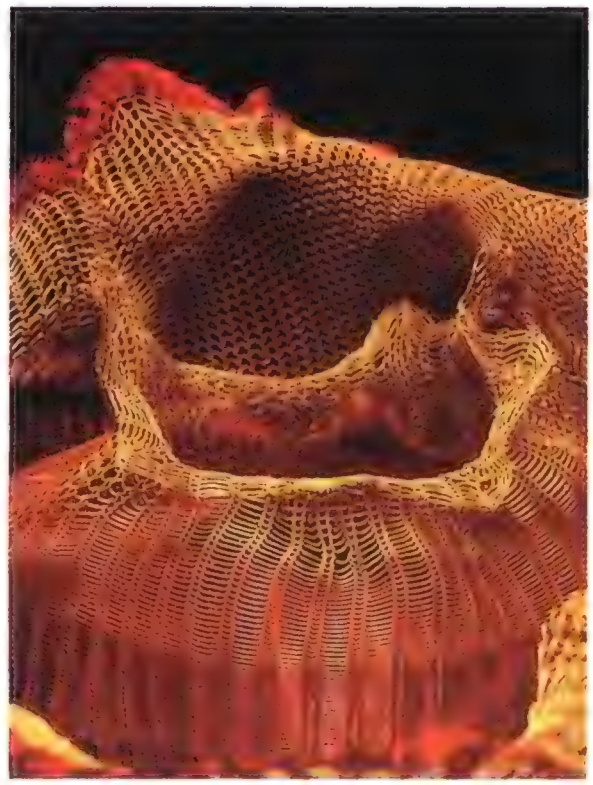
Now in its ninth year, the Craft Show will be held April 18-21 at the Departmental Auditorium, across from the National Museum of American History. *Diane M. Bolz*

Miguel Bizzotto's calfskin pouch took its inspiration from architectural forms.

Pattern in Peter Greenwood's glassware was made using old Venetian technique.

Roddy Reed's hand-built clay pinch pots reveal Oriental, Art Deco, influences.

Classical design of Lilly Fitzgerald's brooch features matrix opal set in gold.



An experiment in form and color, basket by Michael Bailot is knit of dyed wire.

Simple form of chair by Richard Judd is enriched by materials and inlay work.

SMITHSONIAN SEMINARS AND EXPEDITIONS

Seminars

(continued from page 83)

NEW American Impressionists in Connecticut *June 19-23 or September 11-15*

Bali (Indonesia) *June 25-July 9*

Kenya *July 1-18*

The New Europe (France) *July 9-20* Study at the University of Strasbourg.

Hawaii's Active Volcanoes *August 4-8 or August 11-14* Hilo, Hawaii.

Trinity College (Dublin) *August 9-22*

Oxford (England) *September 14-28*

Research Expeditions

Contribute your talent and financial resources to Smithsonian research. Work with curators in Washington, D.C. or at field sites worldwide.

Washington, D.C. *May 21-31* Survey sculpture.

Washington, D.C. *June 16-29 or June 30-July 13* Inventory native-American ethnographic collections.

Washington, D.C. *June 23-July 6* Teachers: assist with a curriculum project at the Air and Space Museum.

Front Royal, Virginia *July 6-14* Study wildlife and vegetation in the Shenandoah Valley.

Costa Rica *July 6-18 or September 29-October 11* Monitor volcanic activity and collect plant specimens.

Fort Ross, California *July 7-14* Excavate a Russian fur-trade settlement.

Pierce, Idaho *July 14-24* Interview loggers.

NEW Jamaica *July 16-28* Document the East Indian festival Hosay.

Washington, D.C. *July 21-August 3* Archive aviation documents at the Air and Space Museum and the Garber Facility.

Washington, D.C. *July 21-27 or October 27-November 2* Work on a state-of-the-art videodisk project.

For seminar brochures, call (202) 357-4700; for expeditions, call (202) 287-3210. Or, write to the address on page 83.

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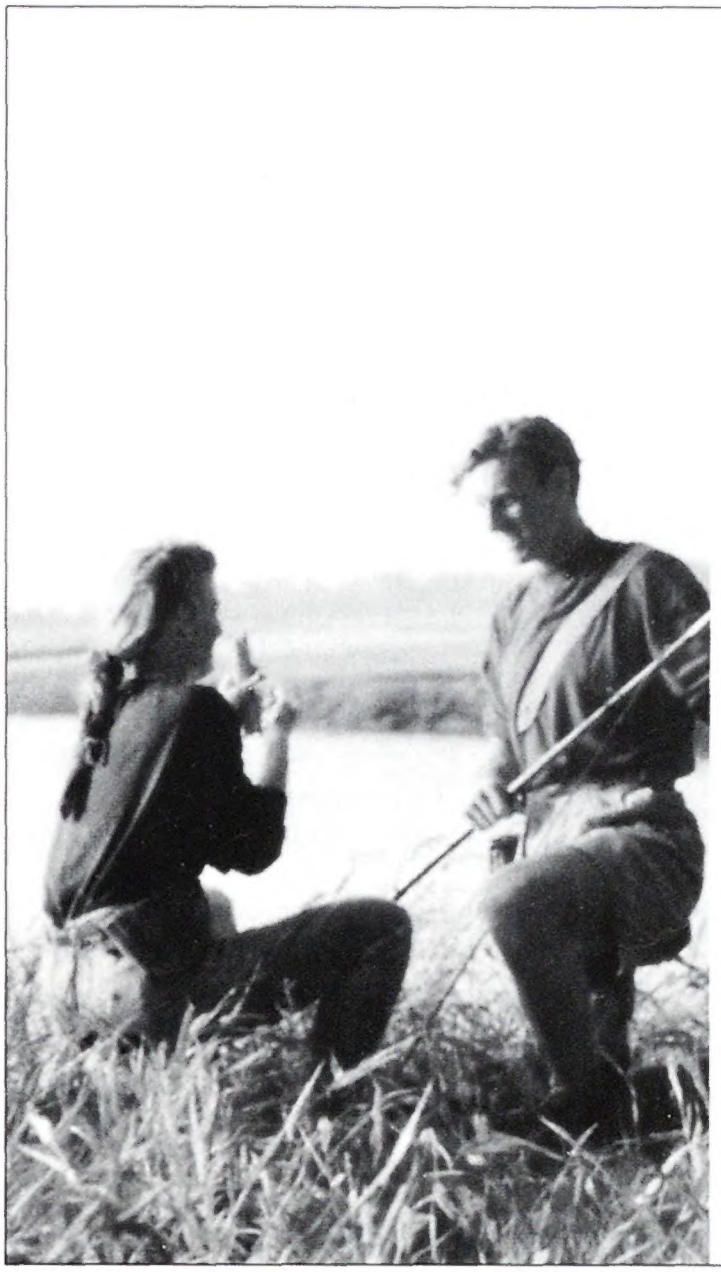

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By Louis Phillips

In golfing, all's well that ends well

It is a little-known fact that William Shakespeare was an avid golfer. Indeed, I had the pleasure of playing a round with him on the famed Orange Brook Golf Course in Hollywood, Florida. I was standing near the third hole, when a golf ball came bouncing dangerously close to me. I turned to complain.

ME: Would you watch what you're doing? You very nearly hit me.

WILL: ". . . you were fore-advised." *Coriolanus, II, 3*

ME: I didn't hear you cry "Fore!"

At that moment I realized I was speaking with one of the world's greatest playwrights. We immediately fell into conversation, and he invited me to join him, even though I hadn't brought my clubs.

WILL: "I'll call for clubs, if you will not away." *1 Henry VI, I, 4*

ME: Should we play the full 18 holes?

WILL: "I'll lead you about a round." *Midsummer Night's Dream, III, 1*

ME: Some friendly stakes? A dollar a hole?

WILL: "There shall be no money. All shall eat and drink on my score." *2 Henry VI, IV, 2*

ME: Why don't you play with Tom Watson or Arnold Palmer?

WILL: "Unequal match . . ." *Hamlet, II, 2*

ME: I understand. Well, you've picked a fine course to play on.

WILL: "How lush and lusty the grass looks! How green!" *Tempest, II, 1*

ME: You tee off first.

WILL: "Pray, let's hit together." *King Lear, I, 1*

I was puzzled at his reply, until I realized he was jesting. Shakespeare's drive landed on the green, pin-high. As we walked toward the green I told him that the week before, I had played Turtle Point Golf Club with the widow of a close friend of mine.

WILL: "Are you not ashamed, to enforce a poor widow to so rough a course?" *2 Henry IV, II, 1*

ME: It was a difficult course, but we enjoyed the play. Tell me, Will, do you know much about modern golfers?

WILL: "O, there be players that I have seen play, and heard others praise." *Hamlet, III, 2*

ME: Such as?

WILL: "The Learned Pate." *Timon of Athens, IV, 3*

ME: Ah, yes, I know him well myself. Jerry Pate, who won the U.S. Open in 1976. Do you know Gary . . .

WILL: "Player . . ." *Macbeth, V, 5*

ME: And who is this coming toward us on the fairway?

WILL: "Why this is Strange." *Comedy of Errors, V, 1*

ME: I wonder what Curtis is doing here today. You know my father used to come to this very same course to watch Tommy Armour play.

WILL: "I have known when he would have walked ten mile afoot to see a good Armour." *Much Ado About Nothing, II, 3*

ME: And did my father and his friends ever march in Arnie's Army?

WILL: "There was none such in the army of any sort." *Much Ado About Nothing, I, 1*

ME: You have a difficult putt here.

WILL: "What subtle hole is this?" *Titus Andronicus, II, 3*

Shakespeare sank his putt with ease.

WILL: ". . . an eagle . . ." *Coriolanus, V, 5*

ME: This is not my hole.

WILL: "Ha' you scored me?" *Othello, IV, 1*

I nodded and recorded his eagle. On the next hole, however, Will didn't do nearly as well.

WILL (addressing the ball): "I shall drive you then." *2 Henry IV, II, 4*

He hit a low line drive. The ball took a wicked bounce into the rough.

WILL: "Why, these balls bound." *All's Well That Ends Well, II, 3*

ME: This is a tricky hole to play.

WILL: "That same dog-fox." *Troilus and Cressida, V, 4*

ME: You mean "dogleg."

Will tramped off into the rough, and with his next shot he ended up in the sand trap.

ME: What did you do in the rough?

WILL: "Hacked and chipped." *Troilus and Cressida, V, 5*

ME: Where did you land?

WILL: "I fall into the trap." *Henry VIII, V, 2*

ME: The sand traps in this course are in good shape.

WILL (with some bitterness): "Pretty traps . . ." *Henry V, I, 2*

I took a seven iron and hit the ball true. It landed on the green and bounced off the pin.

WILL: "Tut, a pin." *Merry Wives of Windsor, I, 1*

Our caddy, a young lad named Edward Seese, handed Shakespeare a putter. Will took offense.

WILL: "Seese is not good to give putter." *Merry Wives of Windsor, V, 5*

Will took a nine iron.

CADDY: Do you want the pin in or out?

WILL (fuming): "Set up the bloody flag against all patience?" *Coriolanus, II, 1*

ME: Be patient, Will.

WILL: "Cursed be the hand that made these holes!" *Richard III, I, 2*

Will chipped his ball into the second trap. I missed my putt and swore.

WILL: "In your bad strokes, Brutus, you give good words." *Julius Caesar, V, 1*

I looked at him. He looked at me. We laughed and decided to call it a day. As we walked off the course, he clapped me on the shoulder and said: "A pot of good double beer, neighbor, drink and be merry, and fear not." *2 Henry VI, II, 3*

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